

Quarry Dust Covers Westerly in Concern

Homes sharing space with mining operations created predictable problems

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*Westerly's three quarries produced 11.5 tons of silica-dust and diesel-soot emissions in 2011.
(Frank Carini/ecoRI News photos)*

WESTERLY, R.I. — This seaside town is known for its beaches, picturesque vistas, the Ocean House and a pop star's mansion. What the local chamber of commerce doesn't promote are the town's three quarries and the community's asthma rates.

Westerly has a long history of granite mineral mining that reaches back as far as the 1830s. In fact, the quarry in the village of Bradford was once home to world-famous Sullivan-Westerly Granite. According to old advertisements, the Sullivan quarry produced extra-fine-grained, blue-white granite used for mausoleums, monuments and statues. The granite's fine grain and hardness can be attributed to the fact that the quarry is composed of about 90 percent quartz — the most common form of crystalline silica, which is classified as a carcinogen.

Silica exposure is a serious threat to some 2 million U.S. workers, including more than 100,000 workers in high-risk jobs such as abrasive blasting, foundry work, stonecutting and quarry work, according to the [Occupational Safety and Health Administration](#) (OSHA).

Breathing crystalline silica dust can cause silicosis, which in severe cases, according to OSHA, can be disabling or even fatal. Silica dust enters the lungs and causes the formation of scar tissue, reducing the lungs' ability to take in oxygen. There is no cure for silicosis, and since it affects lung function, it makes a sufferer susceptible to infections such as tuberculosis.

ecoRI News recently visited a 47-year-old lifelong Westerly resident whose property abuts one of the town's active quarries. He was diagnosed with silicosis last September. He didn't want his name used, but provided ecoRI News with the medical records associated with his recent illness. He said he's a non-smoker, and has never worked in a high-risk industry such as stonecutting or at a quarry.

During our visit, he experienced several coughing fits that forced him into the bathroom.

His parents bought the house in the mid-1970s. The quarry now in his backyard was woods when his parents moved in, but the company's operation slowly expanded. In recent years, the mining operation has intensified, he said.

He said he was "disgusted" and "fed up" with the town's lack of concern regarding working quarries so close to people's homes.

"I can't even enjoy a cup of coffee on my back porch anymore," he said.



The quarry on Old Hopkinton Road, and uncovered piles of sand and dust, abut the playing surface at the Westerly Pee Wee Football Field.

Pebble beach

The Sullivan quarry was abandoned in the 1970s. The quarrying of Westerly granite had slowed considerably as demand waned. Local mining companies closed, quarries became inactive, and residential neighborhoods were developed around these vacant craters. The homes were bought by people who were told and/or thought the quarries would never be mined again, at least not as large-scale operations.

In 2011, however, the abandoned Bradford quarry was reopened by [Copar Quarries of Westerly LLC](#), to blast once-prized granite into rubble small enough to be crushed into pebbles for asphalt manufacturing. The production of asphalt pebbles ushered in a new era of local mineral mining.

The diesel-powered industrial equipment required to produce asphalt pebbles emits particulate matter, also known as [particle pollution](#). This mixture of tiny particles and liquid droplets becomes airborne, and once inhaled, these particles can affect the heart and lungs and cause serious health impacts.

The controversy and public-health problems that followed the increased mining of long-dormant quarries now surrounded by houses clearly illustrates what happens when inadequate planning collides with residential and business interests.

Westerly officials are now grappling with the inevitable fallout. Earlier this month, the Town Council voted to adopt a 180-day moratorium aimed at stopping new quarry operations. The moratorium came as a council committee works on an ordinance that would better regulate this local industry.

Both the proposed ordinance and the moratorium were largely motivated by Copar and its successor, Armetta LLC Sand & Stone. Both companies were cited by local, state and federal agencies for [violating various regulations](#).

In August 2012, for instance, the town issued a cease-and-desist order against Copar, claiming the company “willfully violated” local policies and created a nuisance to neighbors. A site inspection by the town found the company had failed to install measures to control stone dust.

The Rhode Island Department of Environmental Management noted that the quarry failed to comply with a consent agreement that addressed water pollution.

Despite documented violations, the quarry continued to explode earth and crush stone.

More than a dozen neighbors of the Bradford property — owned by the Comolli family’s Westerly Granite Co. Inc. — claimed their lives were disrupted by loud noises and wind-blown quarry dust that more than likely contained crystalline silica. Some filed lawsuits, others worried about their health, and some complained of problems caused by blasting at the site, including cracked foundations and compromised drinking water.

Last year, Connecticut-based Armetta LLC filed for bankruptcy. Its quarrying operation stopped blasting and smashing granite, but mountains of uncovered dust piles containing a known human carcinogen were left behind.

Since silica waste is both a health and environmental hazard, it made sense, at least from a public-health perspective, to bulldoze the sand/dust piles back into the property’s cratered landscape and properly cover the hazard.

Silica waste, however, is also a commodity. It’s used by cement-makers and by the hydraulic-fracturing industry. The left-behind silica heaps at the 108-acre Bradford quarry are being trucked nearly 7 miles to an active quarry on Old Hopkinton Road.

“Public safety isn’t a priority,” said Charles Marsh, a vocal local critic of what he calls a lax attitude by the town and state toward Westerly’s mining industry. “People are unaware of the dangers of silica dust. It’s as dangerous as asbestos dust. They’re playing three-card monte with silica dust.”



The quarry on Old Hopkinton Road, and uncovered piles of sand and dust, abut the playing surface at the Westerly Pee Wee Football Field.

Dirty business

Mining and mineral-processing facilities generate more toxic and hazardous waste than any other industrial sector, according to the [Environmental Protection Agency](#) (EPA). The federal agency says mining waste contaminates drinking water, rivers and streams.

Besides the quarry in Bradford and the mining operation on Old Hopkinton Road, [Cherenzia Excavation Inc.](#) also operates a quarry on White Rock Road. According to the [EPA](#), the three operations, in 2011, produced 11.5 tons of silica-dust and diesel-soot emissions.

The Bradford quarry is about a mile from the Bradford Elementary School. The Old Hopkinton Road quarry abuts the Westerly Pee Wee Football Field, and is less than 3 miles from Westerly High School — closer as a crow flies. The White Rock Road quarry is about a mile from the Springbrook Elementary School.

Last year, the [EPA fined](#) Cherenzia for violations of the Clean Air Act.

The percentage of Westerly children ages 2-17 who had an asthma-related emergency-department visit from 2010-2012 was among the highest in Rhode Island, according to a [2014 study](#) by Rhode Island Department of Health.

According to 2016 Westerly Hospital [patient data](#), about half the patients who are treated at the hospital have chronic asthma and/or chronic obstructive pulmonary disease.

In 2013, the American Lung Association sent a [letter](#) the Town Council and Zoning Board of Review noting how dangerous silica dust is to breathe. Among the organization's noted concerns were:

The Bradford Elementary School is within a few miles of the quarry, exposing children's immature lungs to high levels of fine particulate matter.

The health risk posed by lung exposure to fine particulate matter such as crystalline silica is serious; and when the pollution source is nearby, the health risks increase. Children and people

with asthma and chronic obstructive pulmonary disease are more vulnerable to the risk of being sickened by particles.

Often referred to as “stone dust” by mining interests, silica dust, like asbestos dust, scars and damages lungs. It can’t simply be wiped away with Pledge.

Two years ago, [ecoRI News](#) spent nearly four hours at the kitchen table in Susan Clayton’s home on Niantic Highway, a short distance from the Bradford quarry, speaking with her about the problems caused by a long-dormant quarry becoming active again.

Clayton bought her home in 1982, about a dozen years after the quarry had last been worked. She said the real-estate agent told her the quarry would remain closed and that the last time the property was heavily quarried was prior to World War II.

“We were kids, and it was heaven,” she recalled. “My father was the only person who was concerned about the quarry.”

For the next 28 years, the quarry remained mostly quiet. Clayton and her family hiked the area in and around the property, enjoying the wildlife — swans, ducks and egrets — and vegetation that thrived in the land between Burlingame State Park and the Woody Hill Management Area.

That land is now mostly barren and lifeless, no one in the family hikes it and Clayton is having a hard time selling her piece of heaven.

She put her home on the market three years ago, after being diagnosed with what she said her doctors are calling an unusual cancer. She has undergone chemotherapy, and has told her children she wants her body to be autopsied. She expects crystalline silica will have played a role in her death.

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Rock quarries can adversely impact public health through various environmental and community effects. Below are examples of how these impacts manifest, with cases from around the world highlighting key issues:

Air Quality and Respiratory Health

1. Dust Emissions

- **Silica Dust:** Quarries often release fine particulate matter, including silica dust, which can cause **silicosis**, a chronic lung disease, and increase the risk of **lung cancer**.
 - *Example:* In **India**, workers and nearby residents of stone quarries have shown high rates of silicosis and other respiratory issues due to prolonged exposure to fine dust. ['I wish they could be saved': The victims of India's poisonous dust](#)
 - **PM2.5 and PM10 Particulates:** Dust from blasting, crushing, and transporting rocks contributes to air pollution, worsening conditions such as asthma and bronchitis.
 - *Example:* Residents living near a quarry in **San Rafael, California**, reported health issues due to high levels of dust and particulate matter.
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Noise Pollution and Mental Health

2. Chronic Noise Exposure

- Noise from blasting, crushing, and heavy machinery can lead to **stress, sleep disturbances, and hearing loss**.
 - *Example:* In **Middletown, Rhode Island**, complaints of noise pollution from quarries have been linked to declining mental well-being and quality of life for nearby residents.
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Water Pollution and Quality

3. Groundwater Contamination

- Quarry operations can pollute groundwater through the release of **chemicals, fuels, or sediments**, affecting drinking water supplies.
 - *Example:* In **Hagerstown, Maryland**, quarries have been linked to sedimentation of local rivers and contamination of groundwater with nitrates.

4. Acid Mine Drainage

- Exposure of certain minerals to air and water during quarrying can create acidic runoff, harming ecosystems and potentially polluting water supplies.
 - *Example:* Acidic runoff from quarries in **South Africa** has affected local water systems, endangering both human and environmental health.
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Blasting and Ground Stability

5. Structural Damage and Safety Risks

- Blasting can cause **vibrations** and **micro-earthquakes**, leading to property damage and increased stress among residents.
 - *Example:* In **Brooksville, Florida**, quarry blasting caused concerns about cracks in buildings and infrastructure, along with elevated anxiety in the community.
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Chemical Exposure

6. Toxic Byproducts

- Use of **explosives** and **chemical stabilizers** in quarries may release harmful substances into the air, soil, or water, affecting nearby communities.
 - *Example:* Communities near quarries in **Western Australia** have raised alarms about exposure to nitrogen oxides from blasting operations.
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Increased Traffic and Safety Risks

7. Heavy Truck Traffic

- Quarrying often leads to increased truck traffic, contributing to **road safety hazards**, **air pollution**, and **noise pollution**.
 - *Example:* In **Nashville, Tennessee**, residents living near quarries cited increased health risks from exhaust emissions and accidents involving quarry trucks.
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Case Studies of Comprehensive Impacts

1. Maunabo, Puerto Rico

- A rock quarry was blamed for worsening air and water quality, noise pollution, and creating a public health crisis due to respiratory illnesses among residents.

2. Mutonga Quarry, Kenya

- Dust and noise from quarry operations were linked to a rise in respiratory conditions, hearing impairments, and general stress in the surrounding community.
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Summary of Adverse Health Effects

- **Respiratory Issues:** Asthma, bronchitis, silicosis, lung cancer.

- **Mental Health:** Stress, anxiety, sleep disturbances.
- **Waterborne Diseases:** From contaminated groundwater.
- **Hearing Loss:** From chronic noise exposure.
- **Accidents and Injuries:** Due to blasting, vibrations, and heavy machinery.

Efforts to mitigate these risks include stricter regulations, improved dust suppression methods, community engagement, and better enforcement of environmental health standards.