



# SUSTAINABILITY REPORT

2016

## ABOUT US



### BACKGROUND

The achievements of Graniterock since 1900 are the result of the collective efforts of individuals—each person having the freedom to do the job in the best way they know how. Successfully being in business for more than 116 years in the same areas, communities and towns is the strongest testament in business to the Company's commitment to responsible stewardship of natural resources and care of the environment.

However, few achievements are derived from the effort of only one individual. Teamwork is necessary in the achievements of individuals and the Company as a whole. When financial resources, human talent and energy are directed by core values, core purpose, corporate objectives, cooperative effort and teamwork result in greater achievement. The corporate objectives describe the areas in which the Company is committed to achieving leadership excellence.

The future for Graniterock is exceptionally bright and offers each individual an opportunity for increased responsibility in implementing job improvements and Company improvements which support the highest quality products and services, provide customer satisfaction, community leadership, environmental leadership and stewardship.

Graniterock People are exemplary citizens in the communities in which we live and work, leading by example, pushing for improvements contributing to the betterment of our homes and homeland.

Graniterock's Corporate Sustainability Report will highlight many of the ways the Company and Graniterock People are committed to the highest standards of responsible sourcing, sustainable practices, and environmental leadership.

### DESCRIPTION OF COMPANY

Graniterock has served the needs of the construction industry since 1900. Graniterock supplies locally sourced crushed aggregate, sand and gravel, concrete, building materials, natural stone and asphaltic concrete to any construction job; large or small. The Company's Construction Division is a significant regional engineering contractor building roadways, airports and private commercial and residential projects. Graniterock was founded on February 14, 1900. Graniterock has operations in Watsonville, Santa Cruz, Seaside, Salinas, Hollister, Aromas, Concord, Cupertino, Felton, San Jose, Redwood City, Oakland and South San Francisco.

At Graniterock, we believe quality products, exemplary service and customer satisfaction, community involvement and leadership, and responsible resource management can only be achieved with highly skilled and motivated people who take personal ownership of their work, jobs, and work improvement.

Graniterock received the 1992 Malcolm Baldrige National Quality Award and the 1994 Governor's Golden State Quality Award. The future of Graniterock will echo the many remarkable achievements of the past. Graniterock has strategic plans to maintain its leadership position in the industry and community. High-tech solutions are being implemented to enhance the products and services, maintain and improve responsible sourcing, reduce environmental impacts and heighten sustainable practices throughout the Company.

## OUR VIEW OF SUSTAINABILITY

The Core Values; Safety—Before All Else, Dedication to Customers, Make It Better, Honesty and Integrity, and Building Great Lives

### CORE PURPOSE

Graniterock thrives when our People thrive. We exist to provide a place where inspired People can do their best work - building great projects, producing quality materials and developing enduring customer relationships. The Company's Core Purpose comes alive through the five Core Values we hold closely. The Core Values guide Graniterock People in providing outstanding products, services and satisfaction through sustainable and responsible practices and continuous improvement.

### CORE VALUES

Safety—Before All Else, Dedication to Customers, Make It Better, Honesty and Integrity, and Building Great Lives are important to the Company, community and planet's long-term health and success. Each Core Value is equally weighted in business performance assessments, and each receives consideration in business investment and other decisions made by Graniterock People. The Core Values provide the foundation for a sustainable organization, which translates into work processes that are mindful of societal needs; one of which is the demand for environmental stewardship that values sustainable practices.



## CORE VALUES



## CORE VALUES



### SAFETY

To operate all Graniterock facilities and job sites with Safety as the primary goal. Meeting production schedules or customer commitments are secondary. Every person will put Safety—Before All Else.

A company can only sustain itself and its position in a community if its People are safe, secure, happy, healthy and the business practices and processes help ensure the community and environment is safe, healthy, sustainable and secure. Basic human needs met well will allow for a sense of well-being and spur improvement with an eye to the future and sustainable health of the resources, communities, regions and planet. Everyone at Graniterock is responsible for improving the Safety of our workplaces on a daily basis. Job ownership at Graniterock includes diligently improving safe and sustainable work practices used in performing each job, and removing potential safety hazards from work sites. When an incident occurs, Graniterock People must thoroughly investigate the root causes and take actions to reduce significantly or eliminate the causes so repeat incidents are prevented.

Graniterock believes that each individual, department and branch is able to achieve zero incidents. This can be done only if each individual acts in accordance with the belief that Safety comes before achieving any other objective.

Graniterock People are responsible for utilizing work-safety planning methods, such as Job Safety Analysis (JSA) and Project Safety Analysis (PSA), to ensure safe work methods are used. Safety training is vitally important, and each person must achieve a level of job skill and knowledge that assures work safety.

Graniterock People are obligated to bring unsafe work practices to the attention of their co-workers when they are observed, and to make and implement suggestions on an on-going basis regarding how Safety in the work environment can be improved. We are all empowered to “STOP and Make it Safe” at every job site and work environment. Each team member understands their safety behavior is first and foremost their responsibility and then their responsibility to secure the safety

of co-workers, community and customers. Commitment to the safety of the Graniterock family is a 24/7 task. By providing an expanded and targeted program that can involve Graniterock people in safe practices beyond the workplace, we attempt to address injury and incident losses where they happen most often, which is away from work. All of these efforts allow highly trained and skilled people to execute their work rather than sitting home with an injury. In doing so, Graniterock is able to minimize the effort and resources required to get the work of resource extraction done. Replacement of expertise in almost any process comes with an efficiency cost leading to higher energy, material and schedule losses, not to mention the personal losses each employee experiences due to preventable injury or illness.

### AWARDS

- 2014 CalCIMA Excellence in Safety Award
- 2001 NSSGA Rocky Safety Award

### OUR GOAL

To operate all Graniterock facilities and job sites with Safety as the primary goal. Meeting production schedules or customer commitments are secondary. Every person will put Safety—Before All Else.

### KEY INITIATIVES

- Achieve zero lost-time injuries and zero preventable collisions and property damage incidents
- Company-wide compliance with Safety Process Effectiveness Inspection criteria year-round
- Institute and train SafeStart behavioral Safety training

## CORE VALUES



### DEDICATION TO CUSTOMERS

To earn the respect of our customers by partnering with them and providing them with products and services in a timely and sustainable manner that anticipate and exceed their needs, and by providing them product and service advantage which contribute to the customer's business success, business health and well-being and the health of our collective communities.

Customer service, which deserves and earns repeat customer business, is customized to an individual customer's needs and expectations. Our goal is to understand each customer's needs from the customer's perspective and provide products and services exceeding those unique expectations.

Viewing customers as partners creates a strategic bond that allows Graniterock to extend its core values beyond company borders. Graniterock is able to create options for our customers and end users that may provide longer-lasting or better-performing products and services which reduce wasteful re-work or premature replacement that require additional material and energy resources.

Customer profiles are built from each customer interface, “Yes, We Will” standard of customer care, business transaction through our customer feedback system. We should be satisfied only when the customer feels that our whole organization works in concert to “earn the customer's business every day.”

### OUR GOAL

To earn the trust and respect of our customers to build sustainable relationships through outstanding customer service and high quality products and services

### KEY INITIATIVES

- Our Yes We Will Standard of Customer Care
- Our continuous Customer Feedback System
- Exceed customer expectations for ontime delivery, gate-to-gate times, and plant availability



## CORE VALUES



### MAKE IT BETTER

Graniterock People are achievement oriented, unsatisfied with “things the way they are” when improvements are possible. Rather than preserving or protecting the work of the past, Graniterock People encourage and support both incremental and sweeping change and recognize that risk-taking and honest mistakes are unavoidable parts of doing this.

In everything we do, we will compare ourselves with the results achieved by role-model high performance companies in any industry. We are not satisfied with simply being “good;” we must be among the “best” in every important thing we do. Graniterock People consistently provide a “can do” commitment to individual and team-driven improvements, and provide support for improvement ideas in other areas within the Company.

Customer demand for higher quality is an ongoing reality. Quality might be defined as the elimination of waste; be it energy, material or time. By increasing quality we build more sustainable systems and reduce the total energy/ material input required in order to provide the necessary function. Graniterock continually works to be positioned to meet the highest quality demands of customers with the understanding that in doing so, we extend the life of valuable residential, commercial and public infrastructure. Ultimately this drives down the total cost to society in terms of energy, material and time providing the opportunity for resources to be used for other personal, business and societal needs.

An example of the commitment is reflected in the Graniterock approach to production of flexible pavements when agencies such as the California Department of Transportation offer bonuses (QC/QA environment) for higher quality. Contractors and suppliers can take various approaches to QC/QA projects. Some companies choose to do the bare minimum required and structure their entire

operation around that goal. Graniterock on the other hand builds construction and materials’ processes so that it can achieve the very highest bonuses offered by the agency. National research has clearly demonstrated that the additional benefits derived from flexible pavements with high quality significantly outweighs the additional upfront cost. Not only is the cost of materials and the need for new materials reduced with better-performing pavements, but losses associated with rougher roads (vehicle repair/product spoilage or breakage), energy use and pollution related to premature road closures for repair or reconstruction are significantly reduced.

### OUR GOAL

Continuous Improvement as a way of Life. Graniterock People are empowered and impassioned to Make Things Better.

### KEY INITIATIVES

- Establish processes and systems to recognize and eliminate waste from all aspects of our operations
- Develop and achieve key measures of productivity for each product and process, without compromising quality
- Improve maintenance processes to lower costs and maximize uptime on mobile and stationary equipment

## CORE VALUES



### HONESTY AND INTEGRITY

Graniterock and Graniterock People shall conduct their activities with uncompromising honesty and integrity. People in every job are expected to adhere to the highest standards of business ethics and fairness in all of our dealings with customers, suppliers, communities, government officials and agencies, and other Graniterock People. We expect the same high standards from the people and organizations with whom we work.



### OUR GOAL

To continue to conduct all of our business with the highest degree of Honesty and Integrity.

### KEY INITIATIVES

- No Notices of Violation issued at any Graniterock facility
- Graniterock Short Pay Policy
- Yes We Will Standard of Customer Care
- Customer Feedback System





## CORE VALUES



### BUILDING GREAT LIVES

Graniterock provides an opportunity for personal growth and professional achievement through support of “lifelong learning,” trust in people to do a good job and establishes an environment of freedom for individuals to direct their own work and work improvement. The Company strives to develop job responsibilities that are rewarding, worthwhile and challenging. Graniterock People and the Company demonstrate respect and caring for all members of the Graniterock Team and their families, and for our neighbors, communities, customers, suppliers and the environment. Just as reducing lost time incidents aids extraction efficiencies by keeping the very best people available to do the job, so does the retention of people and the expansion of their capabilities. A well-trained flexible work force allows companies to adapt to changing market conditions without going through the “process upset” and loss in efficiency caused by the inclusion of new members in pivotal roles. Sustainability for any business requires a comprehensive approach to the work that it does. People are at the very core of sustainability. Their willingness to grow and become more vital to the company is a major key to executing and creating the very best and most sustainable approach to the work that we do.

Graniterock People work closely with local government officials and key community decision makers to identify community needs and help to provide the means to achieve them. The environment is important to us; our actions shall be consistent with environmental responsibility.

### COMMITMENT TO ENVIRONMENTAL LEADERSHIP

Graniterock, Graniterock People, and our customers want work to be performed in an environmentally responsible fashion. New technologies and skills are being rapidly developed to minimize adverse environmental impacts.

Graniterock will lead the industry in the identification and implementation of new environmental technologies. Examples include real-time particulate monitoring for the A. R. Wilson Quarry Overburden System, and storm water management systems at ready-mix concrete plants. The Annual Improvement Plan-Environmental is developed and implemented by each department/branch with input from all team members.

We honor our obligations to society by performing our jobs with the highest standards of honesty and integrity. It means more than “obeying the law.” It includes enhancing and protecting the environment, building and maintaining attractive plants and offices of which the community can be proud, and contributing talent, time and financial support to achieve community goals. The Company generally invests 1% of sales in community financial support through matching funding approaches which help encourage greater community involvement by all Graniterock People.

In each community in which we have operations, the branch or plant manager is expected to build effective relationships with government officials and key community decision makers, making our business’ positive economic and beneficial social contributions better understood by them.

### OUR ENVIRONMENT

Graniterock makes every effort to identify and implement technologies that minimize adverse environmental impact—from real-time dust monitoring and storm water management to a near-paperless office environment. In addition, each Graniterock facilities conduct



an annual compliance review to ensure our environmental efforts and actions remain effective. To minimize our visual impact on communities, Graniterock trucks are cleaned daily and our facilities designed to integrate with their surroundings.

Each operation must have all necessary permits such as land use, water discharge, reclamation, air quality, and will operate its facilities in compliance with permit requirements and habitat conservation plans.

### OUR FRIENDS AND NEIGHBORS

The importance of helping our neighbors cannot be overlooked. Through Graniterock Cares, we encourage Graniterock people to take a hands-on approach to community involvement. The company matches team member financial support dollar-for-dollar, and work time is made available to help lead community improvement efforts.

### EDUCATION OF OUR CHILDREN

Our support for educational opportunities at area schools helps ensure a skilled workforce of the future. Through the Baldrige Education Center, located in Santa Cruz County, Graniterock serves as a leadership partner to schools throughout California. Graniterock shares with school superintendents, principals, and teachers, the business principles that earned it the Baldrige Award for Business Management, and how they can be applied to students in public schools to help them achieve higher academic performance.

The Bruce W. Woolpert Algebra Academy is an innovative algebra immersion program that brings together college mathematics faculty, 110 middle school students from seven different schools in Santa Cruz and San Benito counties, business professionals and teachers for a week long intensive study course. Students are who are

motivated to learn and advance in mathematics devote five days of their school vacation to 40 hours of mathematics. It is an education/business/community partnership that helps students succeed as they receive expert instruction from university professors, experience a wide range of hands-on math activities and discover the power of mathematics.

### OUR GOAL

Graniterock provides an opportunity for personal growth and professional achievement through support of “lifelong learning,” trust in people to do a good job and establishes an environment of freedom for individuals to direct their own work and work improvement.

### KEY INITIATIVES

- Individual Professional Development Plans for each Graniterock Team Member
- Intern and Mentoring Programs
- Clearly defined career paths
- Bruce W. Woolpert Algebra Academy
- Graniterock Construction Academy

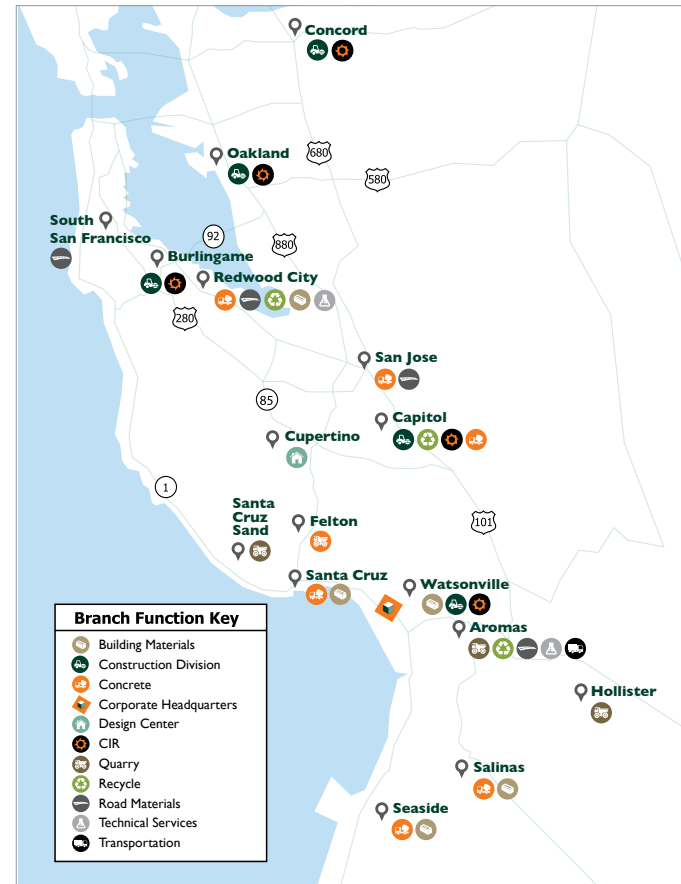
### AWARDS

- NSSGA, Outstanding Community Relations
- Partnership Excellence in School, Business Association of School Administrators, Santa Cruz County



## LOCAL PRODUCTS

### EXTRACTION LOCATIONS



### DISTANCE MATTERS

Graniterock is a local company serving regional markets with locally-sourced products. Unlike imported material, sourcing our material from areas close to our customers helps minimize transportation impact. Most of our products are used within 100 miles of our quarry facilities in San Benito and Santa Cruz counties.

**Graniterock**

# DISTANCE MATTERS

## The Benefits of Local Construction Materials

A community can reduce consumer costs and environmental impacts by using locally produced construction materials

### Shorter Haul Distances are Better for the Environment

- Shorter Haul Distances **Reduce Congestion**
- Shorter Haul Distances **Mean More Money to Build Roads**
- Local Construction Materials **Create Local Jobs**

### Shorter Haul Distances for aggregates, asphalt and concrete are Better for the Environment

If construction materials hauling trip lengths throughout California can be **reduced by even 15 miles**, then the total transport distances could be reduced by **282 million miles per year**. It would have these benefits:

- reduce fuel consumption by **\$44 MILLION** gallons per year
- reduce tail pipe emissions by **835 TONS** per year
- remove over **400,000 METRIC TONS** of greenhouse gases per year
- 42% SAVINGS** MATERIAL COSTS
- reduce road wear **\$12-18 MILLION PER YEAR**
- \$9 MILLION PER YEAR SAVINGS** by decreasing supply delays

### Local Jobs

Creating local construction materials jobs is a sustainable practice – especially when jobs and the products produced benefit the local economy.

Sources: California Construction and Industrial Materials Association; Aggregate Industry in California, California Geological Survey 2007; Construction Aggregate Supply Limitations: Estimates of Economic Impacts, Caltrans, 2007

## LOCAL PRODUCTS

### FREIGHT OR AGGREGATE ON RAIL

Shipping rock, sand and gravel from our quarries by rail to distribution locations in Santa Clara and San Mateo counties has long been a part of Graniterock's operations. Delivery by rail reduces truck traffic on our congested highways and is four times as fuel efficient as trucking. Graniterock started rail shipments with Southern Pacific in the early 1900s from the location formerly known as Logan Siding in Aromas, California and continues to ship railroad cars from the same location, now known as the A.R. Wilson Quarry. Today, over half of the total shipments from the A.R. Wilson Quarry are shipped by rail.

Granite Rock Company has privately owned railroad cars with the designation mark of GRCX, in addition to leased and Union Pacific cars dedicated to our service for a total fleet of over 500 railroad cars. Cars are shipped overnight in unit trains of 100 cars per rail shipment for maximum economic and environmental efficiency.

**Graniterock**

## Advantages of FREIGHT OR AGGREGATE ON RAIL

# RAIL

### Advantages of Rail Transportation

Freight rail is one of the most fuel efficient modes of transportation. Through the development of new "green" technologies and environmentally responsible operating practices, the industry's fuel efficiency is up 99% since 1980.

**1 GALLON** of fuel moves **1 TON** of freight **479 MILES**

Each Railcar Keeps Four Trucks off your Roads!  
"Freight by Rail" not only reduces highway traffic, it improves the safety of the motoring public and increases the longevity of our streets and highways.

**Freight Rail Creates Jobs**  
San Francisco Peninsula freight rail shippers provide thousands of jobs directly, and support thousands more throughout the economy.

**Freight Rail is Good for the Environment**  
On the San Francisco Peninsula alone, using rail instead of trucks to move freight reduces greenhouse gas emissions by more than **4,000 tons per year**.

Rail moves **43%** of the nation's goods while accounting for only **2%** of all Transportation related greenhouse gas emissions



## COLD-IN-PLACE RECYCLING



### TECHNOLOGY HIGHLIGHT: COLD-IN-PLACE RECYCLING

As California faces a growing crisis of crumbling roadways, it turns out there is a way to tackle our aging, broken up streets without going broke or sending another bond measure to the voters.

Cold-in-place recycling (CIR), a solution already used by many cities and counties throughout the San Francisco Bay Area, is a road rehabilitation technique that recycles the top 3-6 inches of existing pavement to improve roadway surfaces.

CIR recycles your existing road, without the need for grinding or new materials, which eliminates waste sent to landfills and all the truck trips that go along with it. CIR is more affordable than traditional remove and replace methods.

Graniterock's CIR business uses the Wirtgen 3800CR, a highly trained crew, and a Caltrans-certified mobile laboratory to rehabilitate roadways while reducing material waste and extensive trucking needs typically seen on base repair and overlay projects.

Cold-in-place recycling has become an increasingly popular alternative to conventional road maintenance methods, for five important reasons:

1. Saves 20%-40% of your road maintenance budget
2. Cuts greenhouse gas emissions by 52%
3. Reduces truck traffic 90%, creating a safer working environment
4. "Zero waste" approach to pavement rehabilitation
5. Faster construction times compared to traditional remove and replace methods

The City of San Jose Public Works Department, responsible for 6,000 lane miles, has incorporated CIR as part of its pavement maintenance program for the past six years. Along with Caltrans, San Jose has created its own CIR specification to use on a project-by-project basis.

"The main reason we like CIR is because it minimizes the traffic impact and the number of trucks coming in and out of the project site," San Jose's Associate Engineer Frank Farshidi said. "We don't have to close the road and residents really like that. We're not hauling new material from the plant, which makes it a more sustainable process."

Several engineers from the City of Santa Clara visited a recent Graniterock CIR job on Vistapark Drive in San Jose to watch the process and determine if it's something that would help chip away at the backlog of crumbling streets.

"CIR is a brilliant solution to one of our biggest problems – really old and aging residential streets," said Jim Parissenti, principal engineer for the City of Santa Clara Public Works Department. "The CIR method will actually let us catch up on our backlog."



## ENVIRONMENTAL PROTECTION



### THREATENED SPECIES PROTECTION

Over the past 50 years, many state and county mining regulations and federal and state environmental laws have been created to protect and conserve local habitat and rare and endangered species. The California red-legged frog was designated as a threatened species in 1996. Its range is mostly limited to the California coast, from Marin County south to Ventura County. Ponds are part of mining operations, and with the capability to create an ideal pond habitat for the red-legged frog, Graniterock was challenged to find a way to combine responsible mining practices with long-term protection and stewardship of the land.

Graniterock's Santa Cruz Sand Plant (also known as the Wilder Sand Quarry) is a source of high-quality sand used for world renowned golf courses of the Monterey Bay. Professional baseball teams also take clay from the quarry to create beautiful infields for their stadiums, and local builders find this sand ideal for a wide variety of construction uses. The Company has owned and operated the plant at this location since 1967.

Graniterock's Santa Cruz Sand Plant and Environmental Services Teams, along with wildlife biologist Dana Bland, built multiple ponds within a 10.5-acre habitat conservation area, as well as other areas on the property. Each pond was designed to provide a mosaic of habitats for breeding and foraging. The California red-legged frog requires ponds with emergent and submergent vegetation, and the ponds are designed to have shallow and deep areas to be able to support all life stages. Frogs use shallow, warmer areas with emergent and submergent vegetation to attach their egg masses. Deeper, cooler areas with emergent vegetation (like tules or cattails) are utilized by adult frogs for feeding and for shelter from predators.

Since creating this habitat for the endangered species in the late 1990s, Graniterock's frog colony has grown to be one of the most successful self-supporting populations of the California Central Coast. Graniterock has protected this area in perpetuity on their Santa Cruz Sand Plant specifically for this frog species. Monitoring of the site over 15 years has proven the long-term success of the Company's conservation efforts. Graniterock has hosted the Elkhorn Slough Coastal Training Program to conduct California red-legged frog conservation workshops on site. Other groups have also toured the location to learn how Graniterock maintains a successful frog population while performing sustainable resource development.

Graniterock's Santa Cruz Sand Plant and its plan to protect and encourage endangered species, such as the California red-legged frog, is an example of responsible management of natural resources, compatible with sustaining the habitat of our rarest inhabitants.





## ENVIRONMENTAL PRODUCT DECLARATION



### ENVIRONMENTAL PRODUCT DECLARATION

Graniterock is one of only eight ready-mix concrete producers nationwide participating in the National Ready Mix Concrete Association's (NRMCA) leading edge Environmental Product Declaration (EPD) program. The program helps customers meet new requirements in green building rating systems, such as LEED v4 and other standards and initiatives, including the International Green Construction Code (IgCC) and the Architecture 2030 Challenge for Products.



EPDs are third-party verified (certified) reports published by product manufacturers that provide quality assured and comparable information regarding environmental performance of their products. We currently have NRMCA-verified EPDs for 30 ready-mix designs from our five locations. To create the EPDs, we conducted a rigorous life cycle assessment (LCA) of the environmental impacts of everything that goes into our concrete products in accordance with the Product Category Rule for Concrete developed by the Carbon Leadership Forum and other relevant international standards followed by an extensive review by independent LCA professionals.

Architects and engineers request EPDs for building products as a way to reduce environmental impacts of the building projects they design. With EPDs, they can objectively compare the environmental impacts of the products they



specify against an industry benchmark or average. Our EPDs show what we've always known - that by using responsibly sourced, locally derived aggregate following best in class environmental practices and mix designs, our ready-mix concrete products consistently outperform the environmental impacts of our competitors. Our industry leading EPDs enable customers to maximize their LEED v4 points and beat the competition.



## ENVIRONMENTAL RESTORATION



## Santa Cruz Sentinel

[www.santacruzsentinel.com](http://www.santacruzsentinel.com)

### NATIVE HABITAT RESTORATION

SANTA CRUZ -- Nearly 100 goats grazed behind the electric fence at the Granite Rock Co. Santa Cruz Sand Plant on Highway 1.

Baby, a great Pyrenees and Anatolian shepherd mix, rested under a clump of coyote brush, her two 2-month-old puppies wrestling nearby.

Behind the bucolic scene, serious work was taking place. The goats, protected from predators by Baby and her pups, were gobbling up nonnative species, the first step in a project to transform a former sand quarry into native California grassland.

Alex Simons, a Graniterock environmental specialist, envisions a day in the not-too-distant future when California wild oats, purple needlegrass and blue wild rye will wrest the ground from the invasive orchard grass. "Having more natives increases wildlife habitat, native bird habitat," Simons said.

But when the company closed the sand mine in the late 1990s, the area was seeded with an erosion control mix that included non-native grasses, Simons said. That was the best practice of the day, she said. Now, natives are preferred.

Graniterock could have mowed the six flat acres surrounded by steep slopes. Simons said she decided to bring in goats after using them to clear a pond overgrown with tule to improve habitat for red-legged frogs last October. This spring, she said, native lupine and carex sprouted from the track the herd followed around the pond.

Simons put the goats to work on the present project before the non-natives produced seeds. After a couple of seasons of grazing, she hopes to wipe out the invasive species.

She's also gathered native seeds from other areas of the property. Some she's planted in small pots to plug into the cleared land in the fall. The rest she's used to seed the ground before and during the grazing.

The goats not only provide the room for the natives to grow, she said, but also press the native seeds into the soil and supply fertilizer to nourish their growth.

Ben Long, owner of Livestock Landscape Solutions of La Honda, said each goat consumes about 15 pounds a day. They'll eat everything, unlike cattle, which are more picky.

Boers make up the bulk of his herd, but he also has Angora, Nubian, Spanish and Kiko goats. All but one are female. Many were obviously pregnant. Others had babies in tow.

Every couple of days or so, Long moves the portable electric fencing to a new location. He rarely has to supplement the herd's food.

Baby keeps them safe, Long said. She's bonded to the herd so she stays close, and her bark and scent keep predators at bay, Long said.

Keith Seversen, Graniterock marketing director, said the system has enabled the Watsonville-based company to meet mine reclamation requirements in an environmentally sensitive way. "Concern for the environment, not just in our company but in general, has grown," he said. "This is the right way to do it."

Follow Sentinel reporter Donna Jones on Twitter at [Twitter.com/DonnaJonesSCS](https://twitter.com/DonnaJonesSCS)



