


Catalyst

Seeing wastewater as a resource

WINNER
Delta Diablo
ddsd.org
Innovation:

Collaborative partnerships to fund recycled water and develop resource recovery projects.

Location: Antioch

General Manager:

Gary Darling

Employees: 78

Revenue: \$34.9 million

Regional
significance:

Developing/funding infrastructure to secure water and recover energy resources.

East Bay Favorite:

Walking from Walnut Creek to top of Mt. Diablo!

East Bay native Gary Darling, general manager of Delta Diablo, is one of those inspirational leaders whose collaborative approach to problem solving is making an impact on Bay Area water supplies.

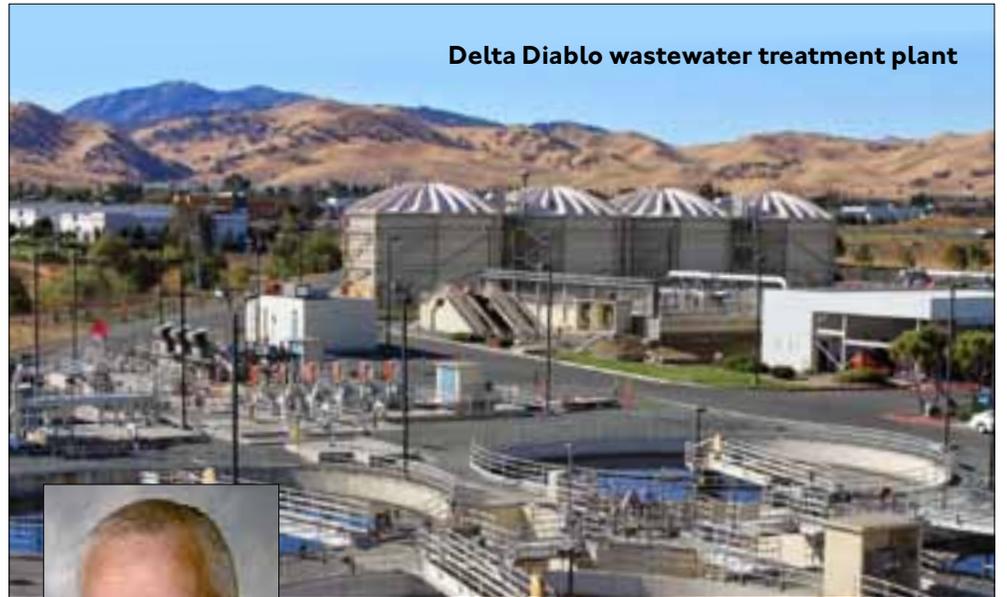
“At the state and federal levels, it was pretty clear that if we brought public agencies and utilities together as one voice, we could be very powerful,” explains Darling. “Instead of competing, we support those projects that are ready to go.”

Delta Diablo serves as the lead agency for the Western Recycled Water Coalition (WRWC), which is developing secure, reliable water supplies for the region, and the Bay Area Biosolids to Energy (BAB2E) Coalition, which is implementing innovative resource recovery technologies that promise to transform the industry.

“The wastewater paradigm has shifted from treatment and disposal to developing resources out of what comes into the plant,” says Darling. “In the Bay Area, we use about 1 million acre feet of water each year. Developing recycled water to help offset that usage just makes good sense.”

With 20 public agencies and two investor-owned water utilities, the WRWC convinced the state to set up an \$800 million, low-interest loan program for water reclamation projects.

Since 2009, the coalition has secured more than \$38 million in federal funding, and more than \$100 million in state and local funding to construct eight projects and


Delta Diablo wastewater treatment plant


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Gary Darling, General Manager, Delta Diablo

study 14 additional projects.

For example, Delta Diablo secured funding for projects that jointly provide low-cost recycled water to school districts, city parks and golf courses in Pittsburg and Antioch. Delta Diablo also serves industrial customers, including two Calpine power plants.

On the energy side, the 19-member BAB2E Coalition is taking the lead on bringing new technology that’s been scientifically proven but not yet available on

a commercial scale, to the Bay Area. “After all,” says Darling, “we’re the high tech capital of the world, so why not take the lead in this effort?”

Through BAB2E, an innovative hydro thermal oxidation technology developed in Ireland will be installed at two East Bay wastewater districts. The first of their kind in the nation, these projects will serve as a model for other metropolitan areas across California and the United States.

Accelerating the energy storage industry

FINALIST
LBNL/CalCharge
calcharge.org
Innovation: Pursuit of cutting-edge energy storage solutions.

Location: Berkeley

Staff scientist/LBNL: Dr. Venkat Srinivasan

Employees: 80 LBNL researchers/ battery program

Revenue: \$14 million/battery program at LBNL

Regional significance:

Advancing the East Bay’s emerging energy storage industry.

East Bay favorite: Strolling through Downtown Pleasanton.

At the peak of the clean energy boom, Venkat Srinivasan, a staff scientist at Lawrence Berkeley National Lab, took a sabbatical to work at an East Bay startup battery company.

Srinivasan was struck by the critical need for new energy storage technology; i.e., better batteries.

Two things stood out: The industry was disjointed and entrepreneurs working on battery technology had no place to go to share ideas and network. At the same time, the Lab’s expertise and state-of-the-art capabilities in battery research were difficult to access. The Lab’s complex contractual mechanisms and lengthy processes discouraged startups from participating.

“As a result of my sabbatical, my definition of innovation changed,” says Srinivasan. “In an academic setting the impact of a new idea isn’t always obvious. If innovation is going to have an impact on making a better world, we needed to focus not only on the technology, but on commercialization – on how to put new ideas into practice.”

When Srinivasan returned from his sabbatical, he initiated conversations about how the Berkeley Lab could change its internal processes to engage more companies and help the battery industry thrive.

Berkeley Lab partnered with CalCEF, the California Clean Energy Fund, to create the CalCharge consortium. The consortium serves as the “glue” for the Bay Area’s energy-storage ecosystem. CalCharge streamlined the contractual mechanism



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Venkat Srinivasan

Staff Scientist, LBNL

for companies to gain access to the Lab’s world-class facilities.

Eight of the 25 East Bay companies involved in energy storage have signed onto the consortium, including Blue Current, Eaton, Enovix, EnZinc, Farasis, Halotechnics, Primus Power and Saratoga Energy. With the exception of Eaton, all are start-ups.

“We’re able to bring companies together to figure out how to solve challenges they have in common – manufacturing, bringing an idea to market, financing, recruiting talent – which frees them to compete in design, materials and technology,” says Srinivasan.

CalCharge is also working with San José State University to create a graduate program in battery technology.

Recently, Lawrence Livermore National Laboratory joined forces with Cal Charge to broaden the consortium’s reach.