



Constructed on a closed landfill, the 16th green of Oakland's Metropolitan Golf Links reflects the golf industry's potential to improve the environment.

# Environmental leadership

## GOLF STARS IN AN AWARD-WINNING ROLE AS THE ENVIRONMENTAL HERO

by  
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Combine a closed municipal dump with environmental problems, the City of Oakland, Calif., and CourseCo, a Petaluma, Calif.-based golf course management and development company, and what do you get? The answer is an environmental success story with golf playing the role of hero.

That's the story behind the 2003 opening of Oakland Metropolitan Golf Links, an 18-hole golf course that helped solve environmental issues, make a landfill site beautiful and useful for area residents, and was one of the facilities that led to CourseCo becom-

ing the first-ever golf business to win California's top environmental award.

Gov. Arnold Schwarzenegger recently presented CourseCo with the 2003 Governor's Environmental and Economic Leadership Award (GEELA). Established in 1993, GEELA is the state's highest and most prestigious environmental honor. It recognizes individuals, organizations and businesses that have demonstrated exceptional leadership in building public-private partnerships while making notable contributions to conserving California's environment.

"The award affirms that our work has

public value, which is deeply gratifying," says CourseCo President Tom Isaak. "It further affirms that the expense and tremendous leadership effort of our superintendents, the primary implementers of these programs, is worthwhile."

Award recipients are selected for promoting excellence in compatible, sustainable economic development while protecting the environment and conserving natural resources. Criteria considered for the award include economic progress, innovation, uniqueness, results, transferability, environmental impact, resource conservation im-



pact and environmental justice.

According to a state press release announcing the award, CourseCo "follows sustainable practices through the use of reclaimed water, development and cultivation of disease-resistant grasses, delineation of environmentally sensitive areas within course boundaries, promoting the use of native plant life and minimization of pesticides."

Raymond Davies, CGCS, CourseCo's director of golf course maintenance and construction and partner in the firm, says the minimization of chemical pesticides is a philosophy at all of the 13 facilities the company manages. Achieving that goal is possible through an Integrated Pest Management/Chemical Application Management Plans (IPM/CHAMPs) program — and was a significant factor in the state's decision to recognize CourseCo.

Davies notes that for a golf course firm to receive an environmental award is particularly difficult in California because the environmental bar is higher than in most of the rest of the country. "This award helps recognize golf's ability to be sound environmental stewards," Davies says. "We've demonstrated that we can manage environment issues extremely well."

### Creating Oakland's Metropolitan Golf Links

Davies says the goal at all CourseCo facilities is to benefit the game, the communities in which the courses are located, progressive golf-industry research and the superintendent profession. The public-private partnership created to build Oakland's Metropolitan Golf Links serves as a prime example.

According to its GEELA application materials, the city of Oakland and Port of Oakland selected CourseCo in early 2000 to build a course on a city landfill. The overall project had three major objectives: Seal an urban landfill to protect water quality; affordably dispose of 1.3 million cubic yards of dredge soils removed from port channels to ease shipping; and construct an economically viable championship golf facility on portions of the landfill property being closed by the city and port authority.

Closing the landfill and disposing of the bay-dredged soils in an environmentally acceptable manner were potentially expensive problems. Using synthetic material or importing clay soils to seal the 100-acre landfill would have been extremely costly. Additionally, the port authority was facing a cost of \$10 million or more for remote disposal of the channel's dredge spoils, a task

that would have required more than 50,000 truck and trailer loads hauled at least 40 miles to an approved depository. Undertaking both projects and building a new course on the former landfill, which at one time had accommodated a very basic course, was a formidable challenge.

The solution required a working partnership to overcome complex technical, political and logistical problems. Numerous legal agreements had to be worked out and those involved included multiple contractors and scores of technical and environmental consultants, engineers, designers, architects and lawyers.

The plan called for pumping dredged bay mud, mostly clay, from the nearby shipping channel to cap the landfill. The capped landfill then was shaped to the rough grade of a golf course. The rough grade was thinly plated with permeable sandy loam soils. Finally, drainage was created and irrigation installed to grow turfgrass. Irrigation water is a blend of reclaimed water and groundwater.

The course, which opened in April 2003, solved all the environmental problems while providing a critically acclaimed course that is environmentally sustainable through site specific and stringent IPM/CHAMPs and runoff controls.

All three partners shared in the capital cost of a project that saved taxpayers tens of millions of dollars. In addition, the facility generates \$500,000 per year in rent to the city and port authority.

Davies noted Metropolitan has benefited the environment in other ways, for example:

- Nitrogen applications are limited and consist primarily of slow-release products that have lower losses to leaching and volatilization.
- Green waste from the golf course is recycled on the property, as well as some waste brought in from elsewhere in the city.
- A recycling program is in place.
- A bird dog controls birds on the course that otherwise pose a hazard to planes at a nearby airport.

### Agronomic advances

The spoils dredged from the channel bottom to cap the landfill originally contained as much as 35,000 parts per million of salt. This has improved in the sandy soils where much of the salt has washed out. Sandy loam material used to plate the fairways was leached with 14 inches of water to reduce the total salts to an acceptable level, but sodium levels continue to be high. Naturalized areas between fairways were not

plated and those heavy clay soils have resisted leaching. They will improve over time, but can only support a small number of plant species. This led to the development of a salt-tolerant grass trial.

"The salty and shallow soils on this site posed tremendous agronomic challenges, which CourseCo has successfully met," wrote Dr. Ali Harivandi, an environmental horticulturist at the University of California (UC), in a letter recommending CourseCo for the award. "This course has become a significant asset for the City of Oakland, developed in a location previously reserved for only industrial use. We have established a research study on this unique site to identify turfgrass species that can be successfully grown in high-salt conditions. Results of this study, generously funded by CourseCo, will benefit every horticultural project in the Bay Area looking for plant material adapted to a saline environment."

A UC Cooperative Extension program at Metropolitan, hosted by CourseCo, attracted more than 100 Northern California course managers to learn about renovation and enhancement of a landfill. Attending the workshop was Gary Carls, CGCS, a past president of the California Golf Course Superintendents Association, and a recently-elected member to the Golf Course Superintendents Association of America (GCSAA) board of directors.

"I was pleased to learn of the challenges faced in the complex nature of closing the landfill according to new standards of encapsulation, and using dredged spoils from the San Francisco Bay to provide soil above the encapsulation so that a golf course could be developed where few alternatives of equal environmental value could be considered," Carls wrote. "Our members have learned a great deal from the agronomic challenges faced by this golf course. Other cities and private entities could learn from this example."

Patrick Gross, southwest director of the United States Golf Association (USGA) Green Section, has consulted on CourseCo properties for the past 11 years. In his letter of recommendation, Gross noted that Metropolitan also is the home of the Oakland Turfgrass Education Initiative, where students from inner-city schools have an opportunity for job training and exposure to the fields of horticulture and turf management.

John Briscoe, an attorney with Stoel

'COURSECO IS THE FIRST GOLF INDUSTRY-RELATED BUSINESS TO WIN CALIFORNIA'S TOP ENVIRONMENTAL AWARD.'



Rives, a western United States law firm that worked on the Metropolitan project, summed up the efforts of the development team at Metropolitan. "This project is an example of excellent environmental planning," he wrote in his letter of recommendation. "The effort was unique, innovative and took many years to accomplish. It sets a wonderful example for public-private partnerships."

## Environmental positioning

Founded in 1989, CourseCo manages facilities in northern California that are primarily owned by municipalities or counties. The company's environmental commitment is important to clients and their communities.

"CourseCo is the only management company I know that has made a commitment to have all their courses become fully

certified in the Audubon Cooperative Sanctuary Program for Golf Courses," Gross said. Five of the 13 courses managed by CourseCo currently are fully certified.

Other examples of CourseCo environmental innovations that help meet community, environmental and industry goals include the following:

• **Crystal Springs.** Harivandi and UC collaborated with CourseCo on a five-year USGA turfgrass research project evaluating new bentgrasses in Burlingame. The research identified cultivars with water and pesticide requirements lower than those of turfgrass varieties currently used on golf course greens. "Located on the watershed for the City of San Francisco, Crystal Springs is a model for what progressive management can accomplish on a sensitive site," Harivandi wrote.

UC hosted a program at Crystal Springs in 1999 that introduced area superintendents to innovative approaches to wildlife habitat, water conservation and pest control. Gross says many projects have been implemented at the environmentally sensitive facility, including minimal use of fertilizers and pesticides, waste recycling, wildlife habitat enhancements and water-conservation programs.

Davies said CourseCo has worked to educate golfers at Crystal Springs about wildlife that lives on the course, including using displays featuring stuffed animals. In addition, brochures describe the environmental program, and Hole-View yardage books include environmental notes regarding wildlife and water consumption.

Superintendent Tim Powers, CGCS, the Northern California GCSA chapter winner of the 2002 GCSAA/Golf Digest Environmental Leaders in Golf Award (ELGA) and GCSAA's ELGA Merit award in 2003, led Crystal Springs' re-certification by Audubon International and the Wildlife Habitat Council. CourseCo also was a national winner of the Golf Digest ELGA in 1998.

• **Callippe Preserve Golf Course.** The municipal course in Pleasanton, is being developed by the city and named after an endangered butterfly, is expected to open in November. CourseCo will manage grow-in, opening and operations under a five-year management contract.

"We have over 20 environmental management plans, including three endangered species, riparian corridors, nitrogen control, ground water quality, bullfrog control, butterfly habitat, wetland mitigation, creek revegetation, specimen tree preservation and more," Davies said. "Our niche, in terms of environmental issues, is to be able to do construction that complies with stringent permit restrictions and puts additional measures in place to allow sites to meet their full potential for environmental benefits. We try to reflect our client's values. Our success has to do with how we manage these sensitive environmental issues in communities that are subject to these stringent permits."

• **Eureka Golf Course.** Davies created and leads a coalition that includes the city, county, environmental organizations, local landowners and area officials who secured \$160,000 in planning grants aimed at restoring the natural conditions of a sub-watershed of the Humboldt Bay watershed that surrounds the course. The multi-year project is designed to naturalize the creek slough, enhance plant and wildlife habitat with the creation of brackish-water habitat, encourage the return of Coho salmon and steelhead trout, and minimize siltation at the oft-flooded and environmentally sensitive course. The project shows that even low-cost courses like Eureka, which charges as little as \$6 per round, can become environmental stewards.

"A major benefit is that the project would provide better playing conditions on a course that typically floods following heavy rains," said Don Roller, Eureka Golf Course superintendent for the past 19 years. "It would also establish a brackish water habitat in the lower portions of the course and below us. By creating high-value wildlife habitat through the course, we become better environmental stewards of the land."

Davies said Eureka's success inspired another creek-restoration project as part of the reconstruction of Foxtail Golf Course, a

CourseCo-managed facility the company restored in Rohnert Park.

• **Los Lagos Golf Course.** Riparian habitat, heritage trees and endangered species were all part of the package the San Jose community wanted protected at Los Lagos, which opened in April 2002. CourseCo responded with 13 separate environmental management plans to address fertilizer and pesticide environmental concerns, while also preserving and enhancing wildlife habitat, according to Gross.

"The city of San Jose had two IPM/CHAMPs written that we had to follow," remembered Davies of Los Lagos and Rancho del Pueblo, another CourseCo-managed facility in San Jose. "We are unique in that all our courses operate under IPM-CHAMPs. It is difficult to get permits for course construction in California without one."

Los Lagos head superintendent Alan Andreasen, CGCS, said the development team re-established about three acres of native habitat, including trees and shrubs to improve wildlife habitat, and constructed a regional trail allowing people to hike and bike through the course property. In addition, 75 acres were set aside for riparian habitat—which is scarce in the San Jose area. Signage in the clubhouse and on the course informs golfers about the facility's unique features and how it benefits the environment.

"We've joined with the Wildlife Center of Silicon Valley and are in the process of using the riparian habitat as a release area for rehabilitated animals, primarily raptors," Andreasen said. "We are also meeting with the local grade school to help conduct field trips through the property that will show students how a golf course is built and display some of our environmental projects."

In the meantime, Andreasen added, the course has more than met its financial projections, hosting 70,000 rounds its first full year and an anticipated 72,000 rounds in its second season.

"What inspires me as a member of the golf course industry is that CourseCo not only talks the talk, but they walk the walk," Gross concludes. "Their commitment to sustainable environmental practices is not just window dressing, but a core value that guides their business practices. In my opinion, CourseCo is clearly a leader in this area, and I applaud their efforts to demonstrate that sustainable resource management is not only a good environmental practice, but is also a good business practice." GCN

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