



STORMWATER SYSTEM SAVES YOUTH SPORTS FACILITY

JANUARY 4, 2017

Recently, ground was broken in Irwindale, Calif., for the first phase of construction of Kare Park, an approximately 14-acre athletic facility. This park is the longtime dream of Kare Youth League, an organization serving boys and girls in the San Gabriel Valley since 1931. Kare Park will be located in the triangular intersection between the 605 Freeway, Arrow Highway, and the Santa Fe Dam and will be the home of the league's after school program for boys and girls, kindergarten through high school. The program features year-round sports including football, volleyball, cheer and dance, basketball, baseball, softball, soccer, and track.

The land on which Kare Park is being built is leased from the U.S. Army Corps of Engineers, and it presents significant challenges for the construction process and stormwater management. The sandy soil is full of cobbles — small boulders that make for difficult excavating and complicated installation of stormwater management devices. Digging out the existing soil in preparation to fill it with more workable groundcover required multiple 30-ton excavators and bulldozers.

This soil issue quickly began to drive up costs of labor and equipment rental. Since Kare Park is a public project, the team was working with a limited budget. Project engineers knew that they would need to find a stormwater solution that was both cost effective and met the regulation standards set forth by the EPA and its National Pollutant Discharge Elimination System (NPDES) permit, which prohibits discharging water offsite without filtration or infiltration.

“Los Angeles County is one of the strictest counties when it comes to stormwater compliance, so it was very important that we chose a quality stormwater management system” said Doug Grove, lead landscape architect for Kare Park. “Based on the site constraints and previous experience, we knew that we would need a system in which the chambers are underground to leave as much room for the athletic fields as possible”.

The civil engineer and landscape architect for the project recommended the CULTEC system, having had success with the system in the past. Upon review, both the city engineer and the county engineer approved of the system for the project site. The County of Los Angeles also required that a geotechnical engineer continuously inspect the site during installation, ensuring the stability of the soil and to ensure that all code regulations were met. All parties approved the design of the stormwater management system and the project moved forward.

Project engineers specified the Recharger V8HD Stormwater Chamber, which measures 32 inches high, 60 inches wide, has an installed length of 7.5 feet, and a bare chamber capacity of 8.7 cubic feet per linear foot. The CULTEC system, made up of 280 pieces, easily met the storage requirement of 25,961 cubic feet; in fact, the system provided nearly 28,000 cubic feet of storage installed within approximately 11,474 square feet. The chambers were installed beneath a baseball and small soccer field, beneath approximately 10 feet of cover. The depth of this installation ensures that the wear and tear of the fields will not affect the life of the CULTEC system.

Though the potential for installation issues was high due to the variable soil, the CULTEC chambers went in without a hitch. Randy Jevs represented CULTEC onsite at Kare Park during the entire installation to assist with any questions or comments from the contractor and his team.

CULTEC's stormwater chambers made a potentially difficult installation run smoothly — and stayed within the budget guidelines set by the city. In addition, CULTEC discounted the project by 25 percent; the company is passionate about supporting organizations that seek to improve the lives of children and young adults, and Kare Park reflects that value. The Kare Park project's expected completion date is early spring 2017, with daily use beginning later in early fall.



The chambers, covered with stone and geotextile, were installed beneath a baseball and small soccer field, beneath approximately 10 feet of cover. Photo: courtesy of CULTEC

Information provided by CULTEC (www.cultec.com (<http://www.cultec.com>)).

[CULTEC \(HTTPS://CSEENGINEERMAG.COM/TAG/CULTEC/\)](https://cseengineermag.com/tag/cultec/) [STORMWATER \(HTTPS://CSEENGINEERMAG.COM/TAG/STORMWATER/\)](https://cseengineermag.com/tag/stormwater/)

(https://cseengineermag.com?bsa_pro_id=119&bsa_pro_url=1)



[PREVIOUS ARTICLE \(HTTPS://CSEENGINEERMAG.COM/ARTICLE/SUSTAINABLE-APPROACH-TO-MOBILITY/\)](https://cseengineermag.com/article/sustainable-approach-to-mobility/)

[SUSTAINABLE APPROACH TO MOBILITY \(HTTPS://CSEENGINEERMAG.COM/ARTICLE/SUSTAINABLE-APPROACH-TO-MOBILITY/\)](https://cseengineermag.com/article/sustainable-approach-to-mobility/)

[NEXT ARTICLE \(HTTPS://CSEENGINEERMAG.COM/ARTICLE/PERFORMANCE-BASED-STORMWATER-MANAGEMENT/\)](https://cseengineermag.com/article/performance-based-stormwater-management/)

[PERFORMANCE-BASED STORMWATER MANAGEMENT \(HTTPS://CSEENGINEERMAG.COM/ARTICLE/PERFORMANCE-BASED-STORMWATER-MANAGEMENT/\)](https://cseengineermag.com/article/performance-based-stormwater-management/)



RELATED POSTS



WATER QUALITY PROTECTION HAS A POSITIVE TRICKLE-DOWN EFFECT
([HTTPS://CSEENGINEERMAG.COM/WATER-QUALITY-PROTECTION-HAS-A-POSITIVE-TRICKLE-DOWN-EFFECT/](https://cseengineermag.com/water-quality-protection-has-a-positive-trickle-down-effect/))
MARCH 12, 2019



HAWAI'I INFRASTRUCTURE RECEIVES D+ GRADE FROM CIVIL ENGINEERS
([HTTPS://CSEENGINEERMAG.COM/HAWAI-I-NFRASCTRURE-RECEIVES-D-GRADE-FROM-CIVIL-ENGINEERS/](https://cseengineermag.com/hawaii-infrastructure-receives-d-grade-from-civil-engineers/))
MARCH 8, 2019



ARTBA: BOOSTING N.J. WATER INFRASTRUCTURE CAPITAL INVESTMENTS WOULD PROVIDE 3:1 ECONOMIC RETURN
([HTTPS://CSEENGINEERMAG.COM/ARTBA-BOOSTING-N-J-WATER-INFRASTRUCTURE-CAPITAL-](https://cseengineermag.com/artba-boosting-n-j-water-infrastructure-capital-)