
Coachella Valley Housing Coalition Villa Hermosa Phase III

Riverside, California



Leading edge water infrastructure enables a low-income housing community in an arid region to treat and recycle rewater on site and reduce reliance on potable water.

SERVICES

Climate Adaptation & Resiliency
Water Strategies

The nonprofit Coachella Valley Housing Coalition (CVHC) aims to improve the living conditions of low-income individuals. CVHC's rental projects are developed to house low-income families, individuals looking for a steppingstone to home ownership, and individuals with special needs unable to find housing in the private market. The six-acre Villa Hermosa development, which consists of nine building housing 1-2, 3-, and 4-bedroom units, is designed specifically for families and farmworkers.

Working with the project's sustainability consultant, Green Dinosaur, as part of an integrated design team including CVHC, stakeholders, architects, landscape architects, MEP engineers, and civil engineers, Biohabitats provided design, planning, engineering, and permitting services to create an onsite greywater treatment and water reuse system.

The system includes a secondary treatment process to treat Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS), as well as mechanical filtration. Greywater from the laundry facilities flows by gravity to a pump basin which has a coarse filter and pressurizes the flow to an Advantex® textile filter. Within the textile filter, the greywater is recirculated through a suspended fabric fixed film media filter. Secondary treated greywater then flows by gravity to a reuse tank where it is stored before being pumped to a mechanical room for final filtration before entering the irrigation system. The system, which collects greywater from the laundry facilities within Blocks 2 and 3 of the Phase III development, is designed to handle a greywater design flow of 3,360 gallons per day.