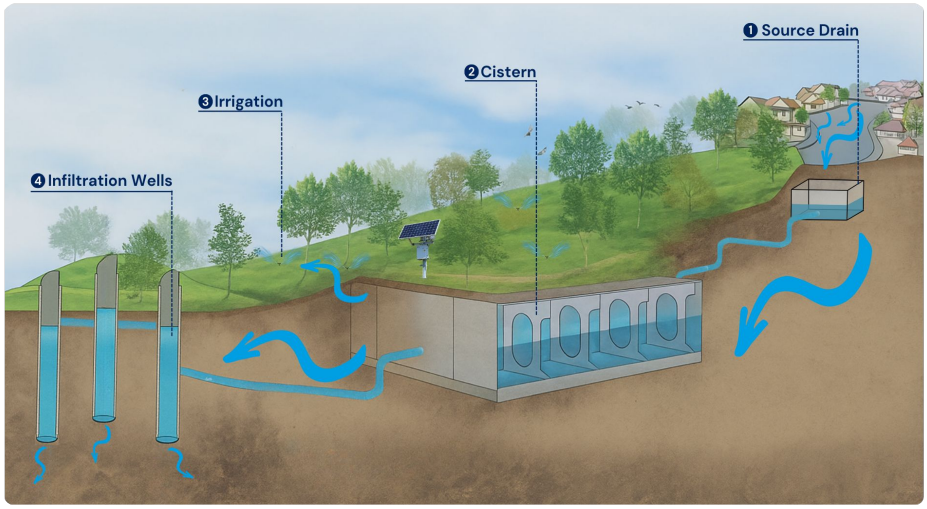
CASE STUDY

Gates Canyon Park

Runoff to Resource: Gates Canyon Park's Smart Stormwater Transformation

The Challenge

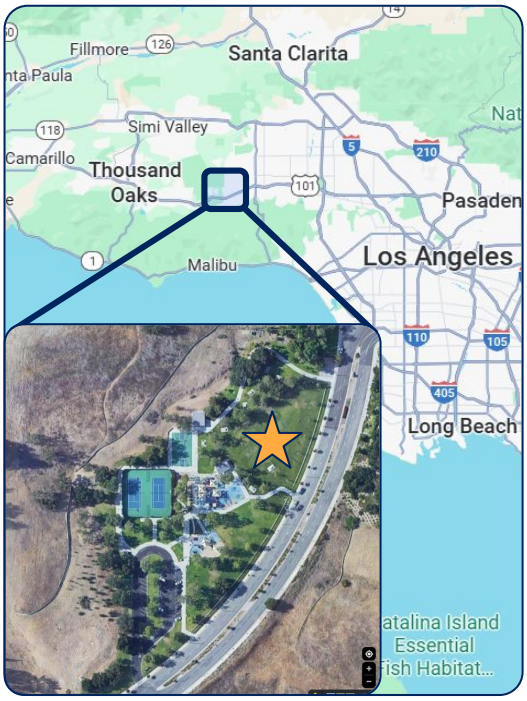
The Gates Canyon Stormwater Improvement Project sought to manage urban runoff from 105 acres of residential land in Calabasas, California. This area drains to Las Virgenes Creek, which is a tributary to Malibu Creek (and, ultimately, Santa Monica Bay), which have been listed as impaired due to nutrients and sedimentation, among other factors. In addition to improving water quality in the receiving streams, this project also aimed to reduce recycled water demand. These conflicting objectives, coupled with the inconsistent and unpredictable nature of rainfall patterns in this area, posed a significant management challenge for the Los Angeles County Public Works.



(1) A source drain collects stormwater runoff and directs it to (2) an underground storage tank, or cistern. Runoff water collected in the cistern is stored and (3) used for watering the grass at Gates Canyon Park. To make room for future storms, the collected runoff is also pumped from the cistern to (4) infiltration wells, allowing water to soak deep into the soil.

At a Glance

- Stormwater capture and reuse system treating 105 acres
- Proactive, real-time control with 72–hour weather forecasts
- Integrated water quality improvement and irrigation
- Reduced water demand



ECONOMICAL

Water Reuse & Reduced Recycled Water Use

RESILIENT

Adaptive Stormwater Management

PEACE OF MIND

Protecting Downstream Ecosystems

The Solution

The Gates Canyon Park stormwater capture and reuse system utilizes continuous monitoring and adaptive control (CMAC) to meet water quality improvement and reuse objectives at a single facility. The system is configured to optimize the facility's storage capacity by constantly maintaining a reservoir of water for use as irrigation within the park while also reserving space for unexpected inflows. The CMAC system prevents overflows from the system by continuously monitoring the 72-hour weather forecast and preparing the system for predicted rain events. If a storm is predicted, the system will *proactively* drain water from the cistern by pumping it into a series of infiltration wells, making room for the incoming storm. If the cistern water level exceeds the target reservoir volume for any reason, it will also *reactively* pump out the excess water to maintain its target levels.

The Results

Since implementation, the CMAC-controlled capture and reuse system at Gates Canyon Park has demonstrated reliable performance.

Irrigation Water

Retaining captured inflow after a storm ensures a consistent water source for irrigation, reducing recycled water demand.

Water Quality

Proactively lowering water levels before storms creates capacity to capture and treat polluted runoff, protecting downstream water bodies.

Community Education

Provides an opportunity for the community to learn about stormwater management principles and project benefits via educational signage.

Recent data analysis indicates water usage for irrigation may average at least 5M gallons per year, and infiltration occurs as needed to provide storage space for incoming runoff. Ultimately, this project's success demonstrates how intelligent, forecast-informed control transforms static infrastructure into a dynamic, multi-benefit resource. This adaptive approach allows communities to turn the challenge of unpredictable rainfall from a liability into a valuable asset for both the public and the environment.

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About OptiRTC

Opti is the leading provider of digital adaptive stormwater control solutions. With over 300 deployments to date, Opti empowers customers and partners to address the impacts of climate change, aging infrastructure, urbanization, and water pollution, enabling them to secure the sustainability of our communities and natural resources. Opti's cloud-based platform optimizes stormwater asset performance through instant actionable insights to provide economic savings, resilient solutions, and peace of mind. With our commitment to innovation, we are driving a resilient and brighter future for all.

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