

A construction site featuring large, dark corrugated pipes laid out in a trench. Two workers in safety gear are visible, one standing and one kneeling. The background shows a steep, rocky hillside. The entire image has a blue tint.

# STORMWATER QUALITY SYSTEMS



# Stormwater mitigation is posing a real challenge as cities continue to expand and build, with many municipalities putting pressure on developers and contractors to help solve this problem.

Low Impact Development expenses are often the most complex and costly item in a site utility package.

That's why our engineering team took this issue to task to provide superior cost-effective solutions and engineering assistance throughout the project life cycle.

A dramatic, dark blue-toned photograph of a stormy sky with heavy, dark clouds. A bright light source, possibly the sun or moon, is visible through a break in the clouds on the left side, casting a glow over a dark, flat landscape that appears to be a field or a beach. The overall mood is urgent and atmospheric.

## **URGENT NOTICE!**

City of Los Angeles requires IAPMO certified  
stormwater collection vessels.

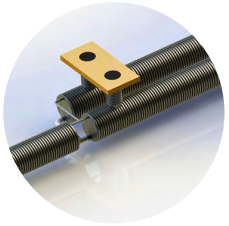
# SYSTEM CAPABILITIES



DETENTION/  
RETENTION



INFILTRATION  
SYSTEMS



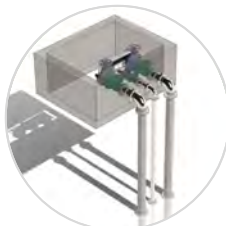
RAINWATER  
HARVESTING  
& REUSE



DRY WELLS



BIO-FILTRATION  
SYSTEMS

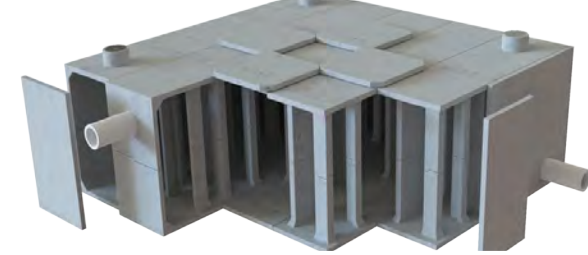


STORMWATER PUMP  
STATION SYSTEMS

# DETENTION / RETENTION

Temporarily retains rainwater until it can be released into the storm drain system

- Water is collected from roofs, parking structures, facilities drainage, AC units, and overflow basins.
- Collected water is processed with debris filtration and then stored until the water can be incrementally pumped and dispensed back into the municipal storm drain system.
- SFWS Retention Vessels include IAPMO Certified Steel, HDPE, Reinforced Concrete, and Fiberglass Options.
- SFWS Retention System Options include Filtration, Treatment, Pump Transfer, Monitoring & Recording.
- UrbanPond provides superior strength & material efficiency over traditional rectangular modules. It has high void percentages to maximize stormwater volume.



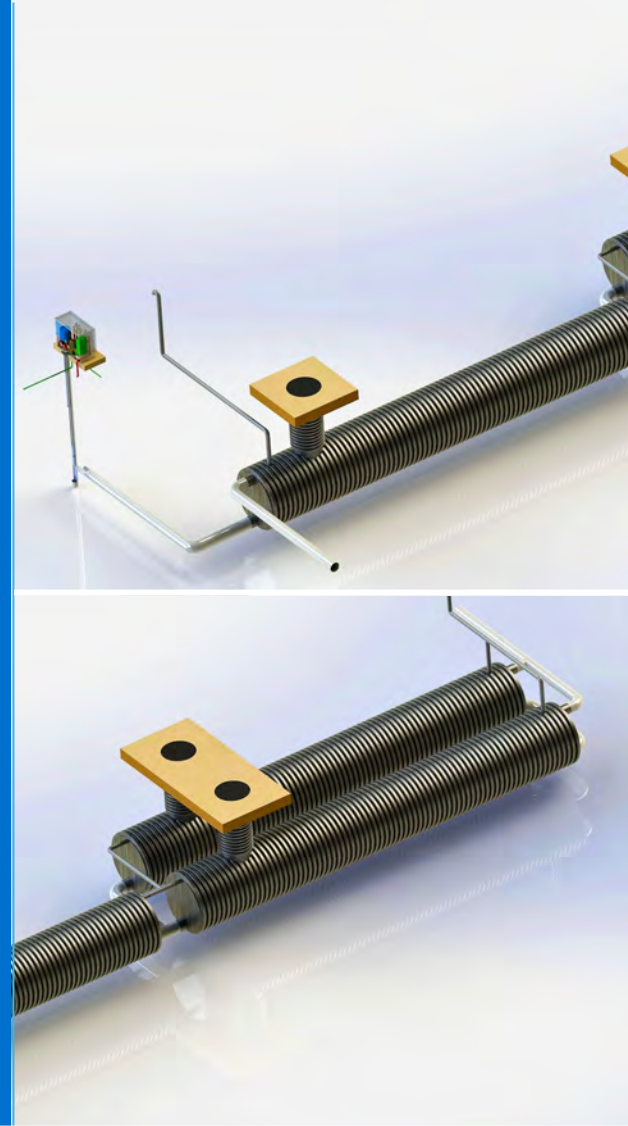


# RAIN HARVESTING

Retains rainwater onsite to be reused for landscape irrigation

The rain harvesting process of collecting and storing water is the same as the detention/retention process; however, instead of being dispensed back into the municipal Storm Drain System - water is repurposed for onsite irrigation.

- Rainwater Catchment
- Pre-Filtration
- Rainwater Storage Vessel
- Pump Station & Controls
- Integrated Irrigation Systems
- NSF Certified Filtration/Treatment
- System Water Replenishment



# BIOCLEAN BIOFILTRATION

Modular Wetlands® System has superior pollutant removal for total suspended solids (TSS), heavy metals, nutrients, hydrocarbons, and bacteria.

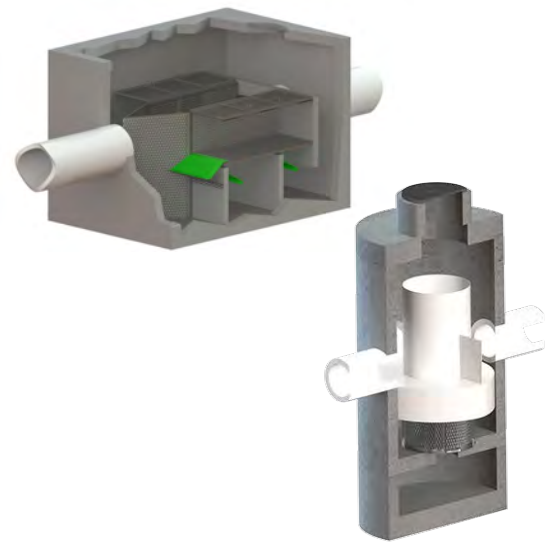
- The Modular Wetlands® System is the first biofiltration system to receive certification as a full capture trash treatment control device.
- Represents a pioneering breakthrough in stormwater technology as the only biofiltration system to utilize patented horizontal flow, allowing for a smaller footprint, higher treatment capacity, and a wide range of versatility.
- Horizontal flow also gives the system the unique ability to adapt to the environment through a variety of configurations, bypass orientations, and diversion applications.
- The Modular Wetlands® continues to outperform other treatment methods with superior pollutant removal for TSS, heavy metals, nutrients, hydrocarbons, and bacteria.



# SEPARATION / FILTRATION SOLUTIONS

Full line of superior filtration and separation solutions

- The SciCLONE Separator allows for 80% total suspended solids (TSS) removal efficiencies, internal bypass, and efficient capture/retention of free floating oils and trash. It is widely considered the easiest separator to maintain in the industry.
- The Deflective Screening Device (DSD) is a highly effective screening hydrodynamic separator designed to meet trash full capture requirements along with providing efficient hydrodynamic separation, non-clogging screening that ensures high treatment flow rates are maintained.
- The Debris Separating Baffle Box (DSBB) is an advanced stormwater treatment system utilizing a non-clogging screen technology that stores trash and debris in a dry state, suspended above the sedimentation chambers, minimizing nutrient leaching, bacterial growth, bad odors, and allows for easier maintenance.





# INFILTRATION SYSTEMS

In conjunction with horizontal leach lines for groundwater replenishing

Onsite stormwater collection is routed into below grade Storage Vessels or HDPE piping. Water is slowly released back into the groundwater system.

- Rainwater Catchment
- Pre-Filtration
- Rainwater Storage Vessel
- Dissipation Into Groundwater



# DRYWELLS

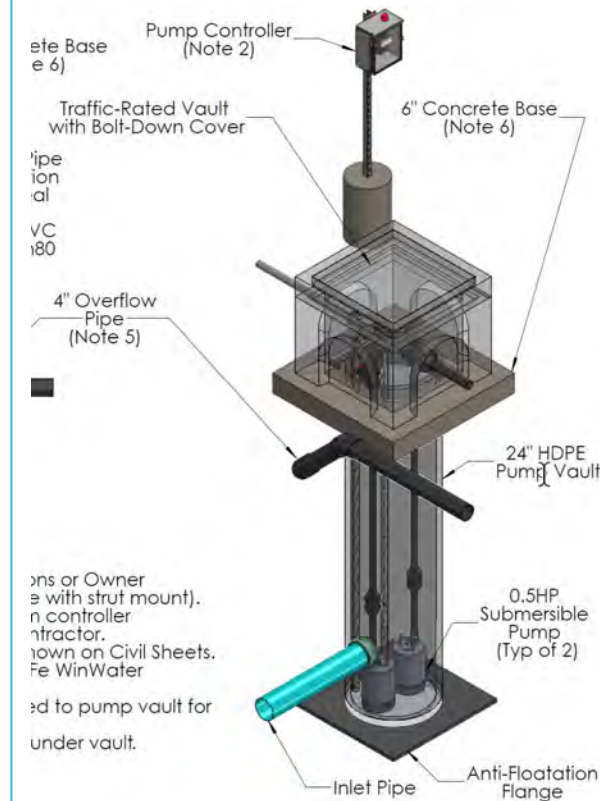
Similar to the infiltration system, but with vertical wells and filtration components

- Scalable water volume point of collection, filtration and drainage, then back into the groundwater system.
- Dry Wells are the most cost effective method of Stormwater collection, filtration and groundwater system dispersion.
- SFWS Dry Well Options include HDPE and Reinforced Concrete Vessels.
- SFWS will assist engineers and recommend Basin Sizing. SFWS Dry Well Basin size ranges are available to accommodate each application.
- Piping materials and sizes are designed per application.



# STORMWATER PUMP STATION SYSTEMS

- Stormwater Pump Stations are scalable, designed and built to provide onsite transfer of water through filtration into storage and final dispensing options.
- Pump Stations can also be designed to move water through onsite irrigation processes.
- Pump Stations typically include Storage Vessels, Pumps, Liquid Level Sensors, Piping, and Operational Controls.
- Vessel Materials of Construction range from HDPE, RCP, Steel, or FRP.
- SFWS Systems are engineered and designed to be self contained but also offer Accessories and Options to complement the system.
- Please call our SFWS Engineering Group for a custom designed system.





# INSTALLATIONS



# ENGINEERING & DESIGN SERVICES

We provide consulting, engineering, design, and sizing recommendations for each individual application.

Services include:

- Value Engineering & Regulatory Support
- Design & Site Specific Logistic Recommendations
- Design Calculations for Storage Flows Monitoring Dispensing
- Stormwater Quality System
- Drawings & Details
- Construction Support
- As Built Drawings
- IAPMO Certification
- California Water Resources Control Board, Full Capture Certification



# PROJECTS & CUSTOMERS

## LADWP

Owens Lake Dust Mitigation, Annual  
Supply Contract - Ops & Maintenance

## CITY OF LA

Hyperion Waste Treatment  
Plant, Port of LA Improvements

## LA AIRPORT AUTHORITY

LAX Facility Improvements

## MWD

Jenson, Weymouth, Skinner, Diemer,  
Mills, Treatment & Filtration Plants

## ARMY CORP ENGINEERS

Camp Pendleton, China Lake NAS, Vandenberg  
AFB, Ft.Irwin, MCAS Yermo Logistics, MCAS  
Miramar, Lemoore NAS, Ft Ord, Edwards AFB,  
Travis AFB, Coronado Naval, North Island NAS,  
Point Mugu NAS, SD Naval Sub Base, Pearl  
Harbor NAS, NWS Seal Beach

## OCWD & OCSD

Plant No. 2, Plant No. 2, AWP  
& Groundwater Replenishment

## CITY OF LAS VEGAS

Bonanza WTP, Water Pollution Control,  
Durango Hills WTP





# PROJECTS & CUSTOMERS

## LA COUNTY DEPT. PUBLIC WORKS

Big Tujunga Dam, Live Oak Dam,  
Various Trunk Replacements

## LA COUNTY SANITATION

Annual Supply Contract - All Waste Treatment  
Plants & Landfills

## EASTERN MUNICIPAL

Perris, San Jacinto, Lake Elsinore,  
Menifee, Winchester

## SAN DIEGO WATER AUTHORITY

Alvarado, Otay, Miramar, Rancho Penasquitos Plants

## BLM & COACHELLA VALLEY WATER

All American Canal Lining

## ENTERTAINMENT

Disney, Sea World, Universal Studios,  
Legoland, Aquarium of Pacific

## CA DOT, METRO

405 Fwy Widening, Green-Blue-Red-Gold  
Light Rail lines



**San Diego County  
Water Authority**



**LOS ANGELES COUNTY  
SANITATION DISTRICTS**  
*Converting Waste Into Resources*

# THANK YOU

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