# PROTECTING OUR WATER RESOURCES

Storm water pollution is the contaminated water that drains from urban areas, through municipal storm drain systems and into bays, the main source of which is the general public. The most common storm water pollutants are vegetation (leaves, grass clippings), trash (fast food wrappers, cigarette butts) and toxins (used motor oil, anti-freeze, fertilizer, pesticides, sewage overflow and pet droppings). Basically, anything dumped or dropped on the ground or in the gutter contributes to storm water pollution, and most people are not even aware that they are polluting.

United Storm Water, Inc. is a pioneer in storm water remediation and storm water management services exhibiting an outstanding level of technical expertise, physical resources, and innovative solutions. Using advanced technologies in storm water management, United Storm Water aids its customers in protecting vital resources and reducing the amount of harmful contaminants that can enter waterways through storm drains. Our custom made treatment control best management practice (BMP) products have been tested and are proven to reduce the level of debris, heavy metals and petroleum hydrocarbons from storm water effluent. Our storm water management services provide proacitve means of complying with the numerous local, state, and federal regulations that govern illicit storm water discharge.

## *SERVICES & PRODUCTS*

- Full Service Storm Water Management:
  - Inspection, Cleaning, Disposal
  - Curb Stenciling
  - Trash Quantifications & TMDL Reporting
- Installation of Trash Excluders:
  - DrainPac Storm Drain Filter Inserts
  - Curb Inlet Screen Covers
  - Connector Pipe Screens (CPS)
- Maintenance of Structual BMPs
- Industrial Vacuum Truck & Industrial Vactor Jetter Services
- Sewer Maintenance
- CCTV Inspection
- Lake Draining & Excavation
- Sludge Dewatering Services
- 24-Hour Emergency Spill Response

## *CURRENT AREAS OF SERVICE*

- Northern California
- Southern California
- Arizona
- Nevada
- Texas
- Louisiana
- Florida
- Maryland
- Pennsylvania
- Hawaii

...and more!

## *CUSTOMERS*

- Government Agencies
- Housing Associations
- Commercial Facilities
- Private Industries

***We provide creative storm water management solutions to suit your individual needs!***

*Phone (626) 961-9326* *www.unitedstormwater.com* *Fax (626) 434-6994*

# EQUIPMENT

United owns and operates a wide variety of equipment required for storm drain cleaning, structural BMP maintenance, excavation and sludge dewatering, and emergency spill response and clean-up services including, yet not limited to the following:

***Heavy Industrial Vactor Jetters***

2000 gal or 16 cu yd-wet & dry vacuum. 8"x20' reach loading boom with 1000 lb capacity. Hydro excavation capability. Water recycling configuration available.

***Heavy Industrial Presvac Vactors***

3000 gal–high dump wet & dry vacuum (offloading ramps not required). Vacuums at 2940-4721 cu ft/min. Air excavation capability. Hi-rail equipped available.

***Residential Industrial Vactrons***

800 gal-wet & dry vacuum with a 700 psi pressure washer onboard.

***Stakebed Trucks***

General transportation & traffic control. Liftgates. 12-16 ft long, 8 ft wide bed. Telescoping lighting.

***Towable Jetters***

Cold water jetting- 14 gal/min, 4000 psi. Hot water jetting- 14 gal/min, 4000 psi, 200 °F

***Roll-Off & Dewatering Bins***

10 yd, 15 yd, 20 yd, 40 yd bins. Dewatering bins are fitted with specialized filter cloth & considered a TTU (Transportable Treatment Unit).

***Roll-Off Trucks & Ends Dumps***

Hydraulic cylinder & winch operated trucks. Transport 10 yd, 15 yd, 20 yd, 40 yd bins.

***Vacuum Trucks***

Stainless steel & fiberglass lined. 2500 gal, 3000 gal, 5000 gal, 5500 gal. Transport acids, caustics, non hazardous liquid.

***Drop Deck Flatbed Trailers***

48 ft long, 8.5 ft wide.

***Enclosed Vans***

28-, 45-, 48-, and 53 ft long; 8 ft wide; liftgate equipped.

***Emergency Response Center***

Fully equipped with PPE for Level B to Level D spill response. Equipped for chemical neutralization, chemical transferring & personnel decontamination. Mobile office equipped (printer, copier, fax). Layover equipped (sleeps 4).

***Emergency Command Center***

Conference room with large dry erase boards (seats 16). Mobile office equipped (printer, copier, fax). Layover equipped (sleeps 6).

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# STORM WATER MANAGEMENT & CLEANING SERVICES

## *STORM WATER MANAGEMENT*

Storm water management is an integral part of meeting National Pollutant Discharge Elimination System (NPDES) general permit requirements and keeping storm drains clean and clear of contaminants. United Storm Water's Project Managers will work with your organization to develop a maintenance schedule that is tailored to meet customer-specific requirements and may include the following:

- Training in Storm Water Awareness & Management
- Inspections (Visual & CCTV)
- Curb Stenciling
- Catch Basin & Storm Drain Line Cleaning
- Storm Drain, Culvert, Channel & V-Ditch Cleaning
- Documentation & Monitoring
    - Field Reports of Drain Locations & Maintenance Data
    - Sampling
    - Trash Quantification
    - TMDL Reports (MS Access Database)
- Transportation & Disposal of Extracted Waste

## *OTHER CLEANING SERVICES*

With its extensive fleet of equipment and experienced personnel United Storm Water is capable of providing a wide range of cleaning and maintenance services that include, but are not limited to:

- All Varieties of Structural BMPs
- Sewer & Brine Lines
- Pump Houses
- Above & Underground Storage Tanks
- Any Type of Industrial Vacuum Services (Non-Hazardous & Hazardous) Except:
    - Explosives
    - Radioactive
    - Asbestos
- 24-Hour Emergency Response Services

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# STRUCTURAL BMP MAINTENANCE SERVICES

Regular maintenance of structural BMP devices is a vital part of a successful storm water management program. Treatment control devices require scheduled inspection and cleaning to ensure that they continue to function as designed, and to prevent the possibility of pollutant overflow and or flooding of surrounding areas that could lead to property damage. United Storm Water provides a wide range of cleaning and maintenance services that include, but are not limited to:

- All Varieties of Structural BMPs
- Baffle Boxes
- Compost Filters
- Stormceptors
- Sand Filter Cleaning & Media Replacement

United Storm Water is also a certified maintenance provider of Contech Engineered Solutions' Storm Water Management Systems. United can help to ensure that your Contech BMPs are functioning as intended and achieving required water quality standards by providing scheduled inspections, cartridge replacement and maintenance services:

Factory Certified CONTECH Maintenance Provider

- Filterra® Bioretention System
- StormFilter® Cleaning & Media Cartridge Replacement
- Jellyfish® Filter
- Vortechs®
- CDS®

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# EXCAVATION & DEWATERING SERVICES

## *EXCAVATION*

United Storm Water provides specialized excavation services including those requiring supplied air in confined spaces, yielding exceptional results in the following areas:

- Full Service Excavation of Lakes & Waterways
- Engineered Lake Projects
- Remediation, Transportation & Disposal of Contaminated Soils
- Tunnels
- Culverts
- Storm Drain Channels
- Potholing (Air- & Hydro-Excavation)

## *DEWATERING*

United Storm Water has been permitted with a Transportable Treatment Unit (TTU) Permit by Rule per the California Department of Toxic Substances Control for dewatering sludge. During the dewatering process, sediment and waste material is separated from water using a filtration liner within the specially designed roll-off bin.

The filtration liner allows the liquid phase of the sludge to escape via a discharge valve located near the bottom of the roll-off bin. The need for solidification agents, additional equipment and labor is eliminated. These benefits, in addition to reduced disposal volumes, result in huge cost savings. After the liquids have been removed, the solids remain in the container within the filtration liner and is ready for disposal.

### *Applications*

- Pond Sludge
- Industrial Sludge
- Storm Water Drain & Ditch Sludge
- Waste Product Washing Sludge
- Most Waste Streams Requiring Solidification

### *Specifications*

- Treats 20 cu yd, or 4,500 gal
- Produces 30-40% waste reduction (based on liquid to solid ratio)
- Retains 97% of heavy metals, total suspended solids and petroleum hydrocarbons
- Expelled water is typically compliant with National Pollutant Discharge Elimination System (NPDES) and Clean Water Act regulations

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# PERMITS, LICENSES & STAFF TRAINING

### *PERMITS & LICENSES*

United Storm Water is a licensed general engineering contractor with the proper certifications for hazardous substance removal, demolition, landscaping, and traffic control. United carries a $15 million insurance policy for general liability and sudden and accidental pollution, and is quite capable and able to resolve any situation in the event of an unfortunate incident while in transit or on site. United currently holds and maintains numerous permits and licenses in addition to the following:

- Minority Business Enterprise (MBE) Per California Public Utilities Commission
- California Contractor License # 768583
    - A- General Engineering; HAZ- Hazardous Substances Removal
    - C21- Demolition; C27- Landscaping; C31- Traffic Control
    - C42- Sanitation System
- EPA Hazardous Waste Transporter No. CAR000064931
- CHP Hazardous Materials Transportation License No. 132487
- DTSC Hazardous Waste Transporter Registration No. 4034
- California DMV Motor Carrier Permit No. 203159
- DOT Federal Motor Carrier Safety Administration (FMCSA) Registration No. 1637075
- DOT Hazardous Materials Certificate of Registration Company ID No. 56341
- Transportable Treatment Unit (TTU) Permit No. USWDW1

### *STAFF TRAINING*

Our highly experienced, professional service staff are trained and medically monitored in accordance with O.S.H.A. Title 29 CFR 1910.120 to conduct tasks involving the handling of or exposure to hazardous materials, substances, or waste including:

- 40-Hour HAZWOPER Training & 8-Hour Annual Refresher Courses
- Traffic Control Training Per Caltrans Standards
- Confined Space Entry & Rescue Training
- Bloodborne Pathogens Training
- CPR & First Aid Training
- Medical Surveillance Program
- LiveScan (Required by TSA)

*All of our service employees are equipped with their own personal respiratory and protective equipment. Each driver and technician is also enrolled in the O.M.V. and D.O.T. drug and driving record programs. We go beyond these requirements with our own yearly refresher course and mandatory bi-monthly safety training meetings.*


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# SCREEN COVER VARIATIONS

United Storm Water's screen covers are structural BMP products that prevent debris and litter from entering the storm drain system while still permitting nuisance and non-point discharge water to flow. These products are very popular with public agencies as they allow the retained pollutants to be removed using routine street sweeping operations. A gap at the top of the screen provides overflow bypass to help prevent the possibility of flooding should the screen be covered with debris during a storm.

***FIXED SCREEN- PERFORATED*** ***FIXED SCREEN- SLOTTED***

Mounted on face of curb opening and remain closed. Can be manufactured from standard 3/4" diameter perforated or 3/4" slotted screen material. Can be used on standard or curved curb inlets. Also available in ARS.

***CUPERTINO, CALIFORNIA*** ***SAN JOSE, CALIFORNIA***

(VERTICALLY OPENING WING-GATE ARS)

Custom message cutout on front screen or standard 3/4" diameter perforated holes. Either screen type can acomodate catch basins as small as 18" wide. Opens automatically during a rain event.

***PHILADELPHIA, PENNSYLVANIA***

(VERTICALLY OPENING WING-GATE ARS)

Custom designed to open automatically within a 45° to 60° angled curb inlet batter to allow maximum water flow during storm events. Used in conjuction with a DrainPac drop inlet filter for full trash capture.

***NEW ORLEANS, LOUISIANA***

(LATERALLY OPENING WING-GATE ARS)

Custom designed to open automatically behind existing curb inlet debris barrier on Burbon Street.

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# WING-GATE AUTOMATIC RETRACTABLE SCREEN (ARS)

The Wing-Gate is an automatic retractable curb inlet screen cover (ARS) that prohibits most trash and debris from entering storm drains during the dry season, and opens automatically with the pressure of water on the screen face to prevent street flooding. The device's screen remains in a closed position during the dry season or low water flow, and the retained pollutants can be removed using routine street sweeping. During periods of increased or heavy water flow the spring activated wing(s) will open automatically to prevent flooding that may otherwise be caused by accumulated debris on the screen.

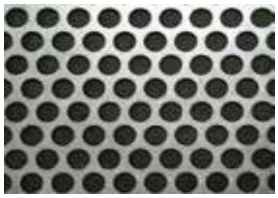
## *Locking and non-locking flood preventive designs available!*

*SINGLE WINGS INSTALLED IN SERIES*

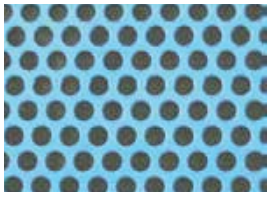
*CALIBRATED ADJUSTABLE SPRING*

### *FUNCTIONALITY SPECIFICATIONS*

- Curb inlet opening from 3" in height
- Depth from the street wall to back wall of catch basin of minimum 6"
- No limit on height from water flow line to bottom of catch basin
- Can be calibrated to open when subjected to water flow levels of approximately 1" to 4"



*PERFORATED METAL*



*CUSTOM COATINGS*

### *PRODUCT FEATURES*

- Fabricated from perforated S-304 stainless steel having 3/4" diameter holes and 50% open area
- Custom made and calibrated to each catch basin where it is installed
- Adjustable ends of wings ensure good fit
- Installed with a 1" to 2" gap at the top of screen for overflow bypass
- Remains closed during the dry season or periods of low water flow
- Designed to open from winged end(s) laterally or vertically based on catch basin configuration
- Spring activated to open with the pressure of water and debris on the face of the screen
- Closes automatically as a storm subsides
- Wings can be manually pinned in the open position as needed during catch basin cleaning and/or extreme storm conditions
- Gates with double or single wings can be installed in series based on catch basin length and flows to the site
- Can be used in conjunction with various storm drain filters

*DOUBLE WING CONFIGURATION*

*SINGLE WING CONFIGURATION*

## *Ask to see a demonstration of the Wing-Gate in action!*

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# CONNECTOR PIPE SCREENS (CPS)

A Connector Pipe Screen (CPS) is a metal screen assembly installed inside a catch basin in front of the entrance to a connector pipe that prevents debris from entering the storm drain system. The CPS unit is designed to retain all trash and gross solids larger than 5 mm (0.197 in) in the catch basin. Therefore, the trash capture and storage capacity of this product is dependent upon the size of the catch basin where it is installed. A CPS unit could be used in conjuction with a curb inlet screen cover and/or DrainPac for added effectiveness based on the level of trash and debris that commonly accumulates at the site. This product is listed within both the Los Angeles and San Francisco Bay Regional Water Quality Control Boards' full trash capture certification program. *United Storm Water has installed the most CPS devices nationwide than any other BMP supplier!*

## *PRODUCT SPECIFICATIONS*

- Manufactured using S-304 perforated stainless steel having 5 mm diameter holes
- Has a minimum overall vertical height of 18 inches
- Has a deflector to prohibit debris from falling behind the screen
- Has an open area of 45% for overflow bypass
- The perimeter of the insert includes a structural frame for stiffness and a bolting surface to fasten the insert to the catch basin floor and wall
- Bottom edge of device is formed to the shape of catch basin floor (maximum 5 mm gap)
- Has a structural integrity to withstand a force of standing water within the catchment area
- Removable front screen available for easy access and cleaning

## *STANDARD CONFIGURATION- FIXED*

Fixed configuration with staff gauge painted on catch basin wall for inspecting drains requiring cleaning

**MOSQUITO ABATEMENT SAMPLING PORT**

**REMOVABLE FRONT SCREEN**

**CUSTOM SHAPES**

## *CUSTOM VARIATIONS*

Custom configurations are designed as needed for nearly any application. Can be configured to be permanently mounted to the catch basin or with a quick disconnect feature for pipe line jetting and to prevent flooding should the system become clogged. The Mosquito Abatement design facilitates water sampling. Catch basins containing CPS units should be cleaned when the screen is ≤ 40% covered to prevent the possibility of flooding and pollutant overflow into lateral line.

**California State Water Board Approved**
**Certified full capture devices are custom made to client specifications!**

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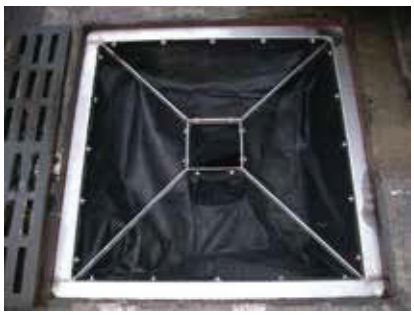
# DRAINPAC VARIATIONS

As pioneers of storm water solutions, United Storm Water has customized many variations of storm water filtration units for the individual needs of its customers. These unique designs have all proven effective in filtering debris, litter and other common storm water pollutants before they can enter the storm drain system. The experience that United has established in the field of storm water management is always capable of developing the unique solution that customers seek. Below are just some of the filter insert variations that United offers.

## *All filters are custom made to any shape or size!*

***DROP INLET WITHOUT CENTER PORT***



***DROP INLET WITH CENTER PORT***

Self supported on the lip of the catch basin underneath the traffic grate. Available with or without a center bypass port which can also be used for sampling. The bypass/sampling port will be located in the center of the filter or on one side based on flows and loads to the site.

***DROP INLET ALL METAL BASKET***

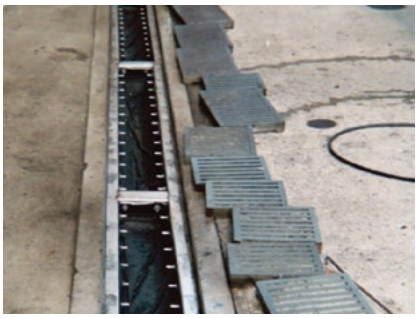
Fabricated from perforated stainless steel having 5 mm diameter holes and a handle for easy removal.

***CURB INLET***

Mounted on the forward inner wall of curb inlets beneath the curb opening. Multiple units can be fabricated and installed side by side to accommodate large openings.

***ROUND INLET***

Self supported on the lip of the catch basin underneath the grate. Available with a center port for overflow bypass and for sampling filtered runoff.



***TRENCH DRAIN***

Created for "strip drain" type storm drain inlets. Fabricated in sections. Filter units sit on lip of the storm drain underneath the traffic grate.

***Media can be added to filters per customer request for even more protection!***

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# DRAINPAC SPECIFICATIONS

United Storm Water's DrainPac is a custom made filter insert that prevents pollutants such as trash, sediment, vegetation, heavy metals, and petroleum hydrocarbons from entering the storm drain system. This multi-layered filtration device is installed in a manner that does not interfere with lateral line water flow. Two commonly used DrainPac configurations treat urban runoff that enters drop inlets and curb inlets. Regardless of the DrainPac configuration that is designed and fabricated for your facility, all of United's storm drain filter inserts are made from the same materials as specified below.

***Filter Liner ****

- 4 oz. non-woven polypropylene
- PVC mesh for overflow by-pass
- Flow rate of 140 gal/min/sq ft

***Liner Support Basket***

- High density polymer
- Rated at 850 lb/ft

***Frame & Attachment Assembly***

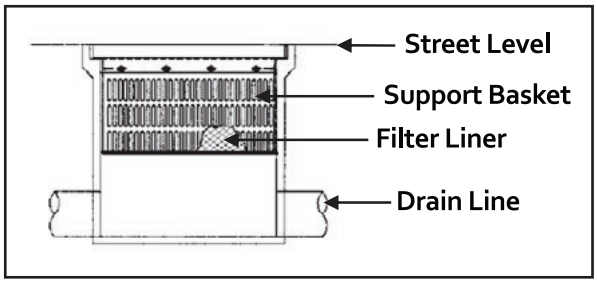
- 304 stainless steel, 12-gauge
- 1" to 2" lip
- PVC molding

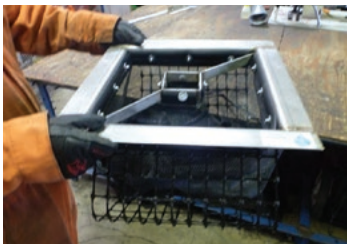
**Specs for standard 4 oz filter liner. Heavier fabric available upon request or as needed for specific field applications.*

## *DROP INLET DRAINPAC*

*Full Capture Device*

Designed for drop inlet type storm drains. Installed/self supported on the lip of the catch basin underneath the traffic grate.

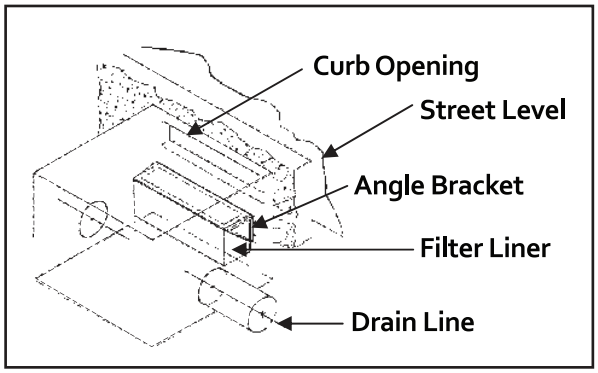


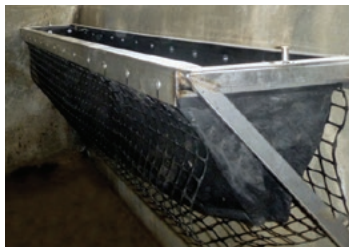



## *CURB INLET DRAINPAC*

*Partial Capture Device*

Designed for curb inlets. Mounted on the forward inner wall of the catch basin beneath curb opening.





***Media can be added to filters per customer request for even more protection!***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# PILOT PROJECTS

## *California's Premiere Storm Water BMP Supplier*

Storm Water BMP Products Installed Nationwide!

## *Trash Amendment Compliance Begins Here*

### *Connector Pipe Screen (CPS)*

- Retains pollutants inside the catch basin
- Full capture BMP device
- Removable panel for pipe maintenance
- Mosquito abatement approved configuration available

### *Wing-Gate Automatic Retractable Screen (ARS)*

- Retains pollutants at the street level
- Opens automatically with pressure of water on screen face, and remains closed during the dry season
- Flow directional configuration options available

### *DrainPac Storm Drain Filter Insert*

- Retains pollutants inside the filter basket
- Drop-inlet option approved as a full capture BMP device
- Curb-inlet option approved as a partial capture BMP device

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United Storm Water is the largest and most experienced storm water management firm in California with an outstanding level of physical resources and innovative solutions. We are a family-owned minority business enterprise (MBE) headquartered in the City of Industry, California, and we've proudly served private and government entities throughout California as well as out-of-state (e.g., Florida, Hawaii, Louisiana, Maryland, Pennsylvania, and Texas).

## *Call to Discuss a Pilot Project in Your State*


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