

Gutter Bin[®]

Because Clean Water Is a Good Thing[™]



Get your mind into the Gutter[™]



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The Gutter Bin[®] stormwater filtration system and Mundus Bag[®] water filter are patent pending

About Frog Creek Partners



Frog Creek Partners is an environmental technology company that specializes in stormwater filtration and pollution measurement services. Our flagship products are the **Gutter Bin**® stormwater filtration system and **Mundus Bag**® water filter. It is the most easily maintained, versatile, and attractive stormwater filter on the market.

Because Clean Water is a Good Thing™

Stormwater Pollution



Why?

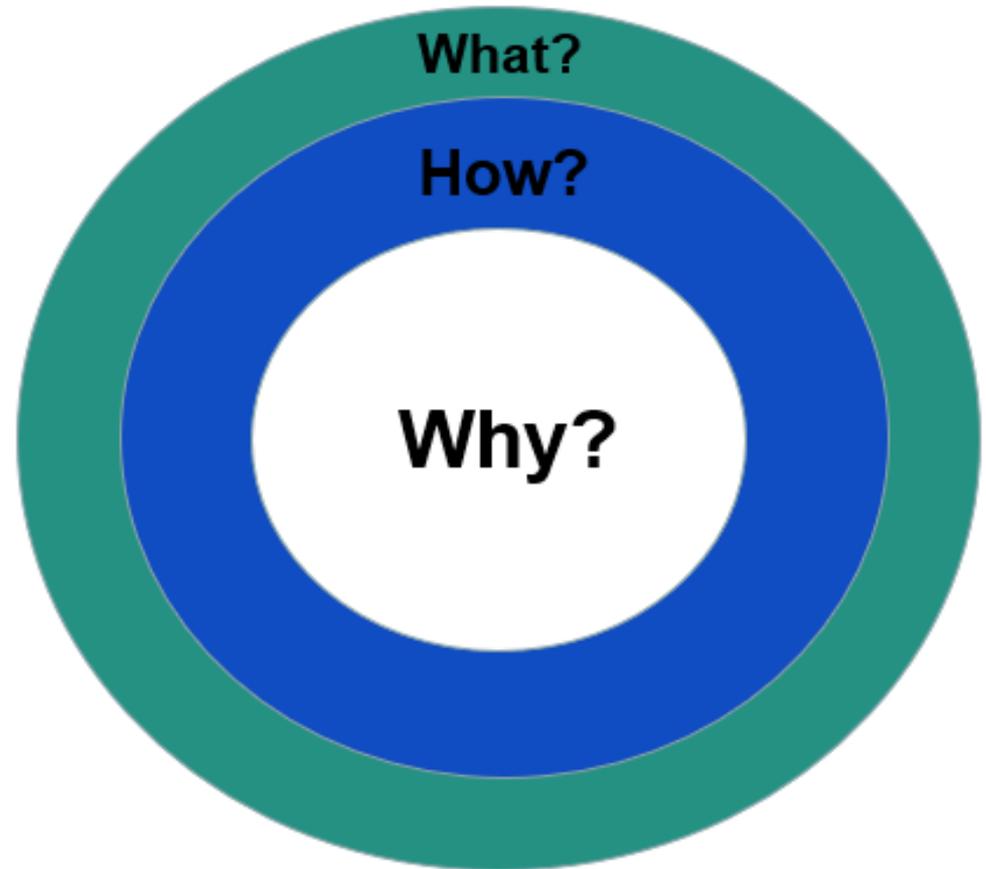
How?

What?

When?

Where?

Who?



What is Stormwater Pollution?



curb inlet



drop inlet



The filth you see on streets flows unfiltered to the river

Most common pollutants:

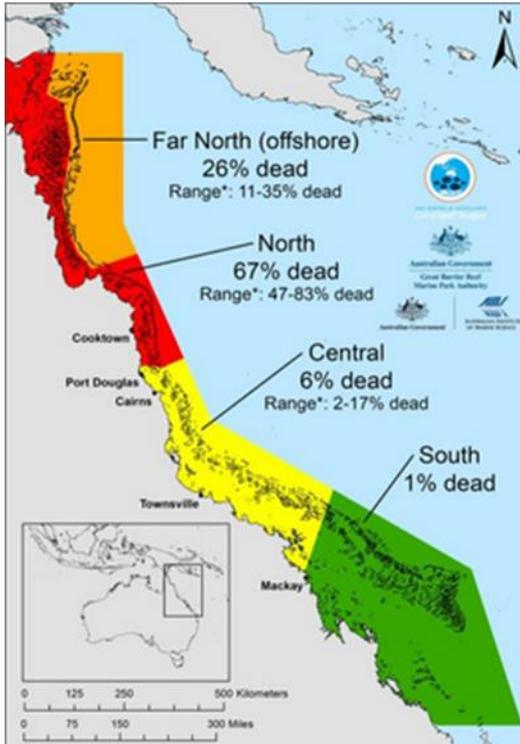
- Trash
- Sediment
- Hydrocarbons
- Nutrients (fertilizers)
- Heavy metals
- Tire treads (millions of tires)
- Cigarette butts
(4,000,000,000,000+ littered/year)

discharge point to river



Death by plastic





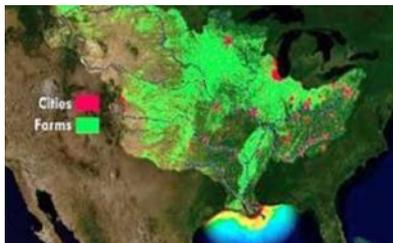
Great Barrier Reef Death



Why is Stormwater Pollution a Problem?



- 29% of the Great Barrier Reef died in 2016 - 2017
- 1 cigarette butt in a liter of water will kill 5 of 10 fish (nicotine kills animals & insects)
- Most stormwater is unfiltered & untreated
- Ocean plastic may outweigh the fish by 2050
- Water is recycled. Rain comes from our polluted rivers & oceans

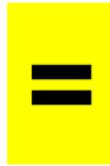


Gulf Coast Dead Zone

EVERYTHING that goes into the **STORM DRAIN** goes into the **RIVER**

Pollution is Earth's cancer.

What is the most commonly polluted item?



- Over 4 trillion (4,000,000,000,000) cigarettes are littered annually – *and climbing*
- 1 cigarette will kill 5 of 10 fish in a liter of water
- Estimate 500 butts littered per US citizen per year_(FCP)

How many are littered in your town? Answer = 500 x population

Where Are Waters Being Polluted?



28% of US stream miles are unfit for human recreation (US EPA)

Four major watersheds originate in Wyoming



Answer:
EVERYWHERE!

Source: USGS Streamer app

What solutions exist to solve this massive problem?



- Stormwater enterprise fund/utility
- More frequent vac truck cleaning
- End of pipe separators
- Street sweeping
- Ocean Cleanup Project
- Storm drain filters





Gutter Bin®

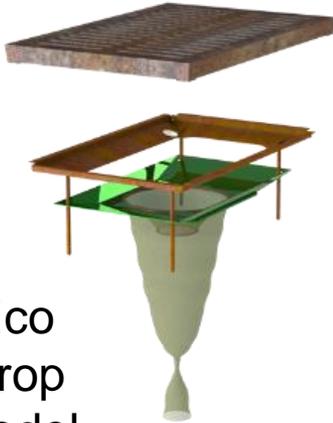
Stormwater Filtration System



The patent pending Gutter Bin is an easily maintained stormwater filter that collects stormwater pollution within a catch basin to improve watershed health.

Original
Gutter Bin®

Eco
Drop
model

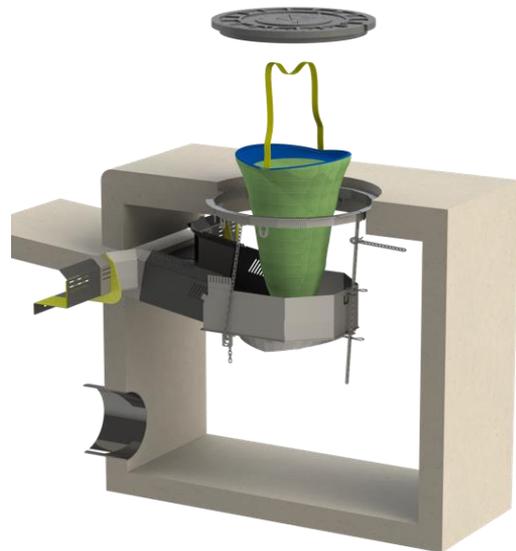


Competitive Advantages:

- Hydraulic capacity
- Adjustable overflow
- Measurable results
- Advertising opportunities
- Chemistry by MYCELX®



Mundus
Bag®



Eco Curb model



Channel Filter System for Trench Drains

Gutter Bin® Glamour Shots



Sponsorship

- non-profit
- Commercial
- Rotary International
- NGO's
- individuals
- community engagement
- fundraisers
- compliance groups
- schools
- municipalities

Functional Art

People and organizations sponsor Gutter Bins and donate them to their community. It's a win for the community, the sponsor, and the water!

Maintenance & CAMP[®] service

Maintenance overview:

- 2-6 times a year
- Service interval depends upon pollution levels, storm events & infrastructure
- Can be maintained by:
 - municipal workers;
 - individual customer;
 - service organizations;
 - compliance groups;
 - contractors; and/or
 - Frog Creek Partners CAMP[®] service



Frog Creek CAMP[®] service (Clean And Measure Pollution) includes:

- measure & record pollution levels by weight;
- dispose of waste properly by state & federal regulations; and
- replace or evacuate Mundus Bag[®]

It only takes 3 to 5 minutes to service a Gutter Bin!

Denver Pilot – 1st year CAMP Service Report



Gutter Bin® CAMP Service Report

City of Denver, Colorado

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The patent pending Gutter Bin® stormwater filtration system creates cleaner rivers because it removes stormwater pollution. Frog Creek Partners' Clean and Measure Pollution Service (CAMP SERVICE®) ensures the Bins stay clean with regular maintenance and we measure our results. Most stormwater is not treated or filtered prior to discharge. The filth you see on the streets is flushed to the river.



Please protect the South Platte River from pollution. Because Clean Water is a Good Thing™

Prior CAMP Date: 22-Feb-19		Gutter Bin™ Location	Gutter Bin Sponsor	Install Date	Current CAMPS results (pounds)	Pollution Captured to Date (pounds)	Pollution composition ranked by weight:
Most Recent CAMP Date: 3-May-19							
SE cor Lincoln & Colfax on Lincoln		Frog Creek Partners	Apr-18	51	349	Trash, sediment, debris, cigarette butts	
SW cor Lincoln & Colfax on Lincoln		Frog Creek Partners	Apr-18	39	364	Trash, sediment, debris, full diapers	
SE cor Broadway and Colfax on Broadway		Greenway Foundation	Apr-18	25	150	Trash, sediment, debris, cigarette butts	
SW cor Colfax & Broadway on Broadway		Greenway Foundation	Apr-18	66	269	Trash, sediment, debris, cigarette butts	
SW cor Broadway and Colfax on Colfax		Frog Creek Partners	Apr-18	31	279	Trash, sediment, debris, cigarette butts	
SE cor Broadway and Colfax on Colfax		Frog Creek Partners	Apr-18	85	318	Trash, sediment, debris, cigarette butts	
Park ave west of platte bridge		Frog Creek Partners	Apr-18	159	454	Sediment & hydrocarbons	
Park Ave & I70 on ramp intersection East		Frog Creek Partners	Apr-18	21	70	Sediment & hydrocarbons	
Fox Street headed east		Frog Creek Partners	Apr-18	114	138	Heavy sediment at new location	
I70 on ramp off Park 1 South		Frog Creek Partners	Apr-18	-	16	Sediment - needs relocation	
SW cor Park & I70 on ramp		Frog Creek Partners	Apr-18	-	26	Relocated - new location	
SW cor Larimer and 15th on Larimer		Greenway Foundation	Apr-18	-	38	Sediment, debris, trash, cigarette butts	
3333 Florida Ave. - south side		Denver Public Schools	Dec-18	-	-	not serviced yet	
Intersection of Cook & Iowa - north side		Denver Public Schools	Dec-18	-	-	not serviced yet	
NE cor Iowa & Steele on Steele		Denver Public Schools	Sep-18	22	22	leaves, trash	

Almost 2500 pounds of pollution captured in just 12 Gutter Bins in one year in Denver, CO!

Denver has over 22,000 storm drains. This equates to about 4 million pounds of pollution dumping to the South Platte River every year.

POUNDS OF POLLUTION PREVENTED FROM ENTERING THE SOUTH PLATTE RIVER WATERSHED =

2493

Average calculated pollution capture rate = 205 Pounds per Bin per Year. Denver has 22,000 storm drains. This equates to 4.5 million pounds of pollution potentially being dumped into the river each year.

Thank you Denver Wastewater, The Greenway Foundation, The Water Connection, Denver Public School System, and Department of Public Health & Environment for supporting this project and helping protect Colorado's water from toxic pollution.

Mundus Bag® Test Results



A representative pollution sample from an industrial port facility filtered through a single SHHT model Mundus Bag® achieved these results.

Table 1 (before Mundus Bag filtration)



Trust our People. Trust our Data.
www.energylab.com

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Frog Creek Partners
Project:
Lab ID: C18110360-001
Client Sample ID: Unfiltered 1

Analyses	Result	Units	Qualifiers	RL
PHYSICAL PROPERTIES				
pH	7.09	s.u.	H	0.01
pH Measurement Temp	17	°C		
Solids, Total Suspended TSS @ 105 C	33400	mg/L	D	200
METALS, TOTAL RECOVERABLE				
Aluminum	378	mg/L		0.03
Copper	30.0	mg/L	D	0.02
Iron	1380	mg/L	D	0.5
Lead	4.10	mg/L		0.001
Zinc	427	mg/L	D	0.07
ORGANIC CHARACTERISTICS				
Non-polar Materials (SGT-HEM)	110	mg/L		5

Table 2 (after Mundus Bag filtration)

Client: Frog Creek Partners
Project:
Lab ID: C18110360-002
Client Sample ID: Filtered 2

Analyses	Result	Units	Qualifiers	RL
PHYSICAL PROPERTIES				
pH	7.27	s.u.	H	0.01
pH Measurement Temp	16	°C		
Solids, Total Suspended TSS @ 105 C	32	mg/L	D	10
METALS, TOTAL RECOVERABLE				
Aluminum	1.21	mg/L		0.03
Copper	0.117	mg/L		0.005
Iron	2.37	mg/L		0.02
Lead	0.009	mg/L		0.001
Zinc	1.02	mg/L		0.01
ORGANIC CHARACTERISTICS				
Non-polar Materials (SGT-HEM)	ND	mg/L		5

**OVER 99%
REDUCTION OF
WATER
POLLUTION**

Social Media



Social media has been a tremendous tool for building name recognition and stormwater pollution awareness both in and out of the industry

- Increased posting on Facebook
- Added LinkedIn
- **Next:** Twitter and Instagram

How You Can Help

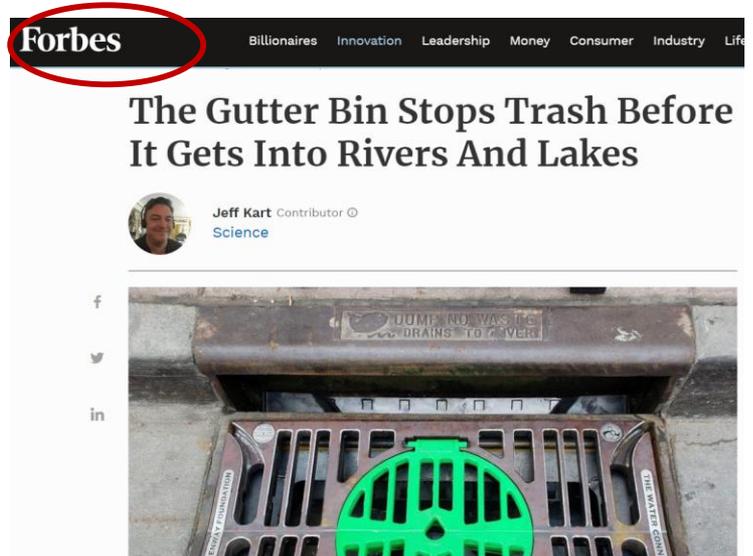
1. **Like** us on Facebook
facebook.com/frogcreekpartners
2. **Follow** us on LinkedIn:
linkedin.com/company/frog-creek-partners/
3. **Share** any FCP Post

Public Relations/Media



How You Can Help

1. **Like** us on Facebook
facebook.com/frogcreekpartners
2. **Follow** us on LinkedIn:
linkedin.com/company/frog-creek-partners/
3. **Share** any FCP Post



For full media coverage visit:

<https://frogcreek.partners/stormwater-resources/>

Who's buying Gutter Bins & Why?



Municipalities & Industry

Regulatory compliance, clean water initiatives, and infrastructure protection

Service organizations & members

Aligns with community involvement missions

Engineering & Development companies

Ease of maintenance and regulatory compliance

Philanthropists, non-profits, private business

Protecting the environment, tax write-off, advertising, &

IMAGE ACTION



*Get your mind into the gutter™...
Because Clean Water is a Good Thing™*



Brian Deurloo

President & Founder

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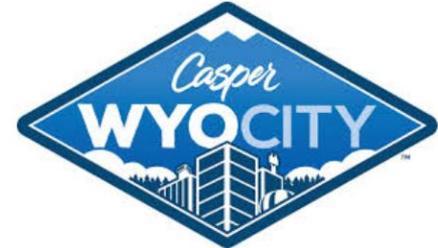
**References to data and statistics available upon request*

Whether you think you can or you can't, you are probably right – Henry Ford

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Current Customers &/or Pilot Locations



DENVER
THE MILE HIGH CITY

Plus many more

Partnerships & Alliances



And one more thing...Filtamag



The Filtamag is a nonlinear flexible magnetic element incorporated to a cigarette filter at time of production so littered butts can be magnetically reclaimed from the environment

- *5.7 Trillion cigarettes produced annually on Earth, 2.73 Trillion produced in America – over 4 Trillion littered worldwide*
- *Filtamag is patent pending in 5 highest tobacco producing countries in the world*
- *Tobacco companies facing serious social & legal risks regarding litter*
- *Extended Producer Responsibility (EPR) laws in EU and USA are a big driver for tobacco companies to find solutions (Gutter Bin or Filtamag)*
- *Started conversation with largest tobacco company in USA*
- *Co-inventor is world leading metallurgist with go to market experience in magnetic applications*

