CASE STUDY | CASE STUDY 2021
STORMWATER TREATMENT CATCH BASIN Inserts
Environmental Business Solutions
STORMWATER TREATMENT CATCH BASIN
Stormwater BIOCHAR.com
STORMWATER TREATMENT

Portland Oregon Winning Combination

Automotive Transporter Company

PROBLEM:

Consistent failures to meet benchmarks for Heavy Metals, specifically Zinc & Iron and TSS. A competitors product was installed and didn't do enough to meet benchmark and had a high cost. In addition, the competitors catch basin insert started rusting to add to the issue.

PILOT TEST:

In December 2019, 1.5 cf of **BiocharBASIC**™ was put in the competitors catch basin inserts to prove to the customer that **BiocharBASIC**™ would work. The test results, below, made them decided to replace the competitors inserts with new inserts from Stormwater**BIOCHAR** and utilizing **BiocharBASIC**™ and managed by Environmental Business Solutions (EBS).

		% Change	PRE Treatment	Unit of Measure	POST Treatment	Unit of Measure
12/5/19	Copper (0.020 mg/L)	64%	28.2	µg/L	10.2	µg/L
	Lead (0.040 mg/L)	74%	7	µg/L	1.8	µg/L
Test Location #1	Zinc (0.120 mg/L)	83%	364	µg/L	61.8	µg/L
	Iron	80%	1640	µg/L	324	µg/L
	TSS (100 mg/L)	79%	28500	µg/L	6000	µg/L
12/5/19	Copper (0.020 mg/L)	-12%	5.7	µg/L	6.4	µg/L
Test Location #2	Zinc (0.120 mg/L)	27%	56.1	µg/L	40.9	µg/L
	Iron	87%	1090	µg/L	146	µg/L
	TSS (100 mg/L)	64%	12500	µg/L	4500	µg/L

FINAL SOLUTION:

In June of 2020, Catch Basin Inserts, utilizing **BiocharBASIC**™ with Blocksom Inlet Filter were installed along with quarterly sweeping of the facility, catch basin insert vacuuming & cleaning with media replacement managed by a stormwater contractor, Environmental Business Solutions located in Portland.

Environmental Business Solutions

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continued

RESULTS:

Below are the test results for testing done before replacing of the competitors product and after the new BMPs including **BiocharBASIC™** was utilized.

Test Date	Copper µg/L	Lead µg/L	Zinc µg/L	Iron µg/L	TSS mg/L
2/16/17	4.8	1.1	501	NT	17.2
4/24/17	4	0	70	NT	0
11/13/17	7	1.4	174	441	22
12/19117	19.8	6.7	269	2440	142
12/20/18	5.6	0.9	85.5	NT	34
3/13/19	15.9	5.2	116	2050	8.96
3/28/19	10.2	5.2	47.5	653	32.5
Average Before Treatment	**9.61**	**2.93**	**180**	**1396**	**36.67**
Benchmark Before 2021	20	40	120	1000	100
10/10/20	5.8	0	66.4	101	8
11/5/20	5	0	52.7	181	6
3/19/21	5.1	0.733	44.07	417.7	5
4/5/21	4.2	0.367	33.13	131.7	0
11/17/21	3.6	0.233	31.07	108.5	1.33
12/1/21	5.1	0.267	34.13	169.3	0
Average After Treatment	**4.8**	**0.27**	**43.6**	**185**	**3.39**
	Copper	Lead	Zinc	Iron	TSS
Average Reduction	**50%**	**90%**	**74%**	**84%**	**99.9%**

NT = No Test Taken

* All Testing Information as provided by customer.

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