



Stormwater BIOCHAR :



THE RIGHT **BIOCHAR**, THE RIGHT **BLEND**, DIALED IN.™



**Vancouver Washington** 

# **Multi-Tenant Industrial Park**

### **PROBLEM:**

Multi-Use, Multi-Leased Industrial Park Exceeding Benchmark of both Zinc & Copper being taken over by the Industrial Park and combining all the individual industrial permits. Industries adding to the levels included a metal recycler shredding facility, multiple steel fabricators, a steel retail storage location and a public truck/vehicle roadway. Site is located in the NW near a major river.

## **SOLUTION:**

After evaluating proposals from three companies to treat the combined stormwater, the choice was to utilize **BiocharPEAT**<sup>TM</sup> in a 350 GPM pump station with a 12' x 22' x 8' tall **CUSTOM TANK** built locally. The **CUSTOM TANK** includes 25 cubic yards of **Biochar**PEAT™ treatment.

### FLOW DESIGN:

An existing catch basin had a weir added to it with a pipe on the influent side put into it to gravity feed the water to a new vault. In the vault, two 350 GPM pumps were installed to pump the water to the **CUSTOM TANK.** The stormwater then gravity flows through the **CUSTOM TANK** and back to the discharge side of the catch basin with the weir and leaves the site to the river.



Stormwater**BIOCHAR** 





QI

Q2

Q3

Ω4

QI

Q1

Q

QI

Q2

Q3

02/11/19

04/05/19

09/09/19

11/18/19

01/23/20

02/05/20

03/06/20

AVERAGE

05/12/20

10.3

22.7

8.63

74.57

23.6

8.32

35.50

15.8



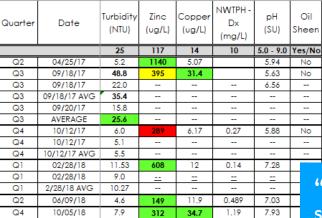


# Stormwater BIOCHAR 2



THE RIGHT BIOCHAR, THE RIGHT **BLEND**, DIALED IN.™





524

561

431

694

645

276

6.36

9.68

9.54

18.6

27.4

27.4

8.83

0.0982

0.139

0.189

0.351

0.277

1 14

7.27

7.78

7.51

7.25

7.31

7.52

7.43

No

Products used in this Box:

"We wanted to share some good news following sampling this month! (Q1 2021) The analytical results were under all the benchmarks for the first time and non-detect for copper!"

...project engineer

First Quarter Test after Treatment tank Installed.

## Second Quarter Test Results - Pre & Post Treatment

Date of Test	Pollutant Tested	% Change	PRE Treatment	Unit of Measure	POST Treatment	Unit of Measure	Amount of Media	Rain Event	Other Info about Site
5/25/21	Turbidity	59.7%	14.5	NTU	5.84	NTU	25 CY	.33"	12' x 22' Box
5/25/21	рН	0%	8.14	SU	8.15	SU	25 CY	.33"	12' x 22' Box
5/25/21	Copper	71.4%	16.2	μg/L	4.63	μg/L	25 CY	.33"	12' x 22' Box
5/25/21	Zinc	94.5%	744	μg/L	40.6	μg/L	25 CY	.33"	12' x 22' Box

## **Four Years after Treatment** tank Installed.

Media was changed out after three quarters of not hitting benchmark.

	Date of Test	Pollutant Tested	% Change	PRE Treatment	Unit of Measure	POST Treatment	Unit of Measure
r	9/25/24	Zinc	76%	664	μg/L	161	μg/L
r	-,,-	Copper	61%	17	μg/L	6.65	μg/L
ľ	10/16/24	Zinc	37%	399	μg/L	250	μg/L
	10/16/24	Copper	70%	25.5	μg/L	7.7	μg/L
	1/10/25	Zinc	14%	1120	μg/L	962	μg/L
200	1/10/25	Copper	34%	22.7	μg/L	15	μg/L

Proven. **Effective** Affordable.



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