



PR5 Water Treatment System



PATENTED DESIGN

Clearflow's internationally patented PR5 Reactor is designed to enhance the effectiveness of Water Lynx blocks.

Water flow entering the PR5 can be controlled to provide optimum reaction conditions for flocculation.

The end result is a greater removal efficiency with larger particles making them easier to settle and trap.

This compact, portable, reusable system minimizes cost and can be automated to meet the needs of the client.



DEWATERING

The PR5 Water Treatment System when set up, will treat sediment-high laden water as it is pumped from the site, and allows discharge of water back into the environment or a storage system for re-use.

LAKES AND PONDS

Lakes, ponds or standing water can be cycled through the PR5 System and returned to the basin or to storage tanks for possible re-use. Suspended material, metals and nutrients responsible for algal blooms can be captured in settling tanks or by the use of Clearflow filter mediums, before the water is released.



REPORT RESULTS FOR THE PR5 WATER TREATMENT SYSTEM

Sherwood Park Golf Course

Northern Bear Golf Course

CALCULATED PARAMETERS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Anion Sum	meq/L	3.9	2.8	28%	19	18	5%
Cation Sum	meq/L	3.8	2.8	26%	18	17	6%
Hardness (CaCO3)	mg/L	150	110	27%	43	39	9%
Ion Balance	N/A	1.0	0.99	1%	0.94	0.94	0%
Dissolved Nitrate (NO3)	mg/L	0.02	0.01	50%	0.09	0.06	33%
Nitrate + Nitrite (N)	mg/L	0.005	0.003	40%	0.024	0.017	29%
Dissolved Nitrite (NO2)	mg/L	<0.01	<0.01	BDL	<0.01	<0.01	BDL
Total Dissolved Solids	mg/L	210	160	24%	1000	960	4%
MISC	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Conductivity	µS/cm	380	280	26%	1600	1600	0%
pH	N/A	8.51	9.64	N/A	8.94	8.8	N/A
ANIONS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Alkalinity (total as CaCO3)	mg/L	100	56	44%	820	800	2%
Bicarbonate (HCO3)	mg/L	120	29	76%	870	860	1%
Dissolved Chloride (Cl)	mg/L	21	16	24%	39	21	46%
NUTRIENTS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Dissolved Nitrate (N)	mg/L	0.005	0.003	40%	0.021	0.014	33%
Dissolved Nitrite (N)	mg/L	<0.003	<0.003	BDL	0.003	0.003	0%
ELEMENTS (TOTALS)	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Aluminum (Al)	mg/L	0.33	0.035	89%	3.7	2.3	38%
Antimony (Sb)	mg/L	<0.0002	<0.0002	BDL	0.005	<0.002	>60%
Arsenic (As)	mg/L	0.0017	0.0017	0%	0.0039	0.0025	36%
Barium (Ba)	mg/L	0.05	0.03	40%	0.15	0.09	40%
Beryllium (Be)	mg/L	<0.001	<0.001	BDL	<0.001	<0.001	BDL
Boron (B)	mg/L	0.05	0.04	20%	0.22	0.21	5%
Calcium (Ca)	mg/L	33	22	33%	18	14	BDL
Chromium (Cr)	mg/L	<0.001	<0.001	BDL	0.007	0.003	57%
Cobalt (Co)	mg/L	0.0005	<0.0003	>40%	0.0037	0.0016	57%
Copper (Cu)	mg/L	0.0034	0.0013	62%	0.010	0.006	40%
Iron (Fe)	mg/L	0.59	<0.06	>90%	7.7	3.1	60%
Lead (Pb)	mg/L	0.0004	<0.0002	>50%	0.0042	0.0023	45%
Lithium (Li)	mg/L	<0.02	<0.02	BDL	0.11	0.1	9%
Magnesium (Mg)	mg/L	16	12	25%	4.2	2.6	38%
Manganese (Mn)	mg/L	0.025	<0.004	>84%	0.14	0.058	59%
Molybdenum (Mo)	mg/L	0.0016	0.0019	INC	0.0029	0.0026	10%
Nickel (Ni)	mg/L	0.0037	0.0021	43%	0.0095	0.0047	51%
Phosphorus (P)	mg/L	<0.1	<0.1	BDL	0.2	0.2	0%
Potassium (K)	mg/L	5.8	4.3	26%	4.8	3.7	23%
Selenium (Se)	mg/L	<0.0002	<0.0002	BDL	0.0007	0.0003	57%
Silicon (Si)	mg/L	0.7	0.3	57%	16	9.6	40%
Silver (Ag)	mg/L	<0.0001	<0.0001	BDL	<0.0001	<0.0001	BDL
Sodium (Na)	mg/L	14	12	14%	410	390	5%
Strontium (Sr)	mg/L	0.22	0.17	23%	0.11	0.08	27%
Sulphur (S)	mg/L	18	19	INC	24	22	8%
Thallium (Tl)	mg/L	<0.0002	<0.0002	BDL	<0.0002	<0.0002	BDL
Tin (Sn)	mg/L	<0.001	<0.001	BDL	<0.001	<0.001	BDL
Titanium (Ti)	mg/L	0.009	0.001	89%	0.096	0.046	52%
Uranium (U)	mg/L	0.0022	0.0018	18%	0.0021	0.0018	14%
Vanadium (V)	mg/L	0.002	0.002	0%	0.015	0.007	53%
Zinc (Zn)	mg/L	<0.003	<0.003	BDL	0.032	0.013	59%
LOW LEVEL ELEMENTS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Cadmium (Cd)	µg/L	0.012	<0.005	>58%	0.14	0.078	44%
Dissolved Mercury (Hg)	µg/L	<0.001	<0.001	BDL	0.008	0.007	13%
Total Mercury (Hg)	µg/L	0.003	0.003	0%	0.010	0.010	0%
MISC. INORGANIC	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Kjeldahl Nitrogen	mg/L	1.5	1.1	27%	1.4	1.2	14%
Organic Carbon (C)	mg/L	11.6	10.7	8%	11.1	12.8	INC
Suspended Solids	mg/L	16	4	75%	380	15	96%
CONVENTIONALS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Ammonia (N)	mg/L	0.12	0.11	8%	0.09	<0.05	>44%
DEMAND PARAMETERS	UNITS	PRE TREATMENT	POST TREATMENT	%	PRE TREATMENT	POST TREATMENT	%
Biochemical Oxygen Demand	mg/L	<6	<6	BDL	<3	<4	BDL
Chemical Oxygen Demand	mg/L	41	27	34%	49	51	INC
Clearflow NTU	N/A	213	2.91	99%	95.6	1.89	98%

BDL = Below Detected Limits

INC = Increased

All data provided by third party analysts.