Go Blue H2O, LLC

Presents

Wastewater

Remediation Service

Water Quality = Liquid Life

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Visit our website at GoBlueH2O.com

Go Blue H2O, LLC

Plant Operation Service

1. All plants are setup to accommodate truck delivery 24 hours a day.

2. A containment station is available for truck to discharge their loads.

3. Clients with contracts will be able to pickup clean usable water equal to the volume discharged at each plant.

4. Plant operations range from 135 to 2,000 gallons per minute.

5. You can deliver with your trucks or we can pickup from your location.

Electro Coagulation (EC) Wastewater Remediation

NO CHEMICALS USED!

What is it?

The separation of contaminants from water using electricity and then physical separation from the water using stainless steel micron filtration.

What are the results?

Water that is reusable and clean for discharge.

Solids that are in a form that can be disposed into a non-hazardous landfill.

Electro Coagulation

How does it Work?

1. Electrical current passes through water using bipolar electric metal plates/blades in a patented chamber.

2. Converts alternating current (AC) to direct current (DC) voltage.

3. Destabilizes suspended, emulsified, or dissolved oil and other constituents in an aqueous medium.

Electro Coagulation

600 GPM Unit (2,270 Liters Per Minute)

Steel Blade Chamber

Electro Coagulation

Volume Processing Sizes

Unit Model	Unit Size (Gallons per Minute)	Unit Size (Litres per Minute)	Current (60 sec. res.)
A	1.5	5.67	GPM 110 Volts
B	3	11.35	GPM 240 Volts
C	6	22.71	GPM 480 Volts
D	10	37.35	GPM 480 Volts
E	15	56.76	GPM 480 Volts
F	30	113.52	GPM 480 Volts
G	50	189.20	GPM 480 Volts
H	90	340.56	GPM 480 Volts
I	135	510.84	GPM 480 Volts
J	250	946.00	GPM 480 Volts
K	360	1,362.24	GPM 480 Volts
L	500	1,892.00	GPM 480 Volts
M	600	2,270.40	GPM 480 Volts
N	2,500	9,460.00	GPM 2,400 Volts

Electro Coagulation

Footprint Sizes

Unit Model	Inches Wide	Inches Long	Inches High	CM Wide	CM Long	CM High
A	20" (1' 8")	24" (2' 0")	48" (4' 0")	50.80	60.96	121.92
B	36" (3' 0")	36" (3' 0")	48" (4' 0")	91.44	91.44	121.92
C	42" (3' 6")	40" (3' 4")	52" (4' 4")	106.68	101.60	132.08
D	54" (4' 6")	48" (4' 0")	62" (5' 2")	137.16	121.92	157.48
E	66" (5' 6")	76" (6' 4")	62" (5' 2")	167.64	193.04	157.48
F	66" (5' 6")	76" (6' 4")	70" (5' 10")	167.64	193.04	177.80
G	92" (7' 7")	90" (7' 6")	80" (6' 7")	233.68	228.60	203.20
H	92" (7' 7")	90" (7' 6")	80" (6' 7")	233.68	228.60	203.20
I	92" (7' 7")	90" (7' 6")	80" (6' 7")	233.68	228.60	203.20
J	216" (18' 0")	204" (17' 0")	84" (7' 0")	548.64	518.16	213.36
K	216" (18' 0")	204" (17' 0")	84" (7' 0")	548.64	518.16	213.36
L	216" (18' 0")	204" (17' 0")	84" (7' 0")	548.64	518.16	213.36
M	216" (18' 0")	204" (17' 0")	84" (7' 0")	548.64	518.16	213.36
N	216" (18' 0")	1,122" (93' 6")	84" (7' 0")	548.64	2,849.88	213.36

Electro Coagulation

BENEFITS

- ☐ No chemicals; no chemical safety requirements
- ☐ Kills virus, cysts, & coliform bacteria
- ☐ Better removal capabilities than for Chemical Coagulation
- ☐ Removes species that CC cannot remove
- ☐ Produces cleaner water and less sludge
- ☐ Sludge filterable; pass leachability tests
- ☐ EC results in 80% less solids
- ☐ Solids dewaters 76% faster
- ☐ Minimal setup time
- ☐ No temperature effect
- ☐ No moving parts; small footprint

Electro Coagulation

Applications

PRETREATMENT FOR FILTRATION

- Currently, pretreatment to UF, FP and RO
- Removal of suspended solids is most cost- effective application of EC
- EC better removes Fats, Oils, & Greases (FOG)

Electro Coagulation

METALS, IONS, HARDNESS & TURBIDITY

Wastewater Pre and Post EC Treatment

One Past Through the EC Unit

mg/l (ppm)

Contaminant	Pre Treatment	After Treatment	% Removal
Aldrin (Pesticide)	0.0630	0.0010	98.40
Arsenic	0.0760	<0.0022	97.12
BOD	1050.0000	14.0000	98.67
Boron	4.8600	1.4100	70.98
Cadmium	0.1252	<0.0040	96.81
Chromium	139.0000	<0.1000	99.92
Cyanide (Free)	723.0000	<0.0200	99.99
DDT	0.2610	0.0020	99.20
Lead	0.5900	0.0032	99.46

Electro Coagulation

ORGANICS

Wastewater Pre and Post EC Treatment

One Past Through the EC Unit

Contaminant	Bacteria Raw	After Treatment	% Removal
Bacteria	110,000,000.00 cfu	2,700.00 cfu	99.99
Coliform	318,000,000.00 cfu	< 1.00 cfu	99.99
E. coli	>2,419.20 mpn	00.00 mpn	99.99
Enterococcus	83.00 mpn	>10.00 mpn	82.87
Total Coliform	>2,420.20 mpn	00.00 mpn	99.99

Electro Coagulation

Results of Radioactivity Testing at a Government Facility

CONTAMINANT	Before	After	% Removed
Americium-241	71.9900 pCi/L	0.5700 pCi/L	**99.20**
Plutonium-239	29.8500 pCi/L	0.2900 pCi/L	**99.00**
Radium	1093.0000 pCi/L	0.1000 pCi/L	**99.99**
Uranium	0.1300 mg/L	0.0002 mg/L	**99.83**

Electro Coagulation

Has Been Successfully Used to:

- Harvest protein, fat, and fiber from food processor waste streams
- Recover emulsified oil from slop oil
- Separate drilling mud to make water reusable
- Clean and separate production water
- Clean and separate fracturing water
- Recycle water, allowing closed loop systems
- Remove metals and oil from wastewater
- Recondition antifreeze by removing oil, dirt, and metals

Electro Coagulation

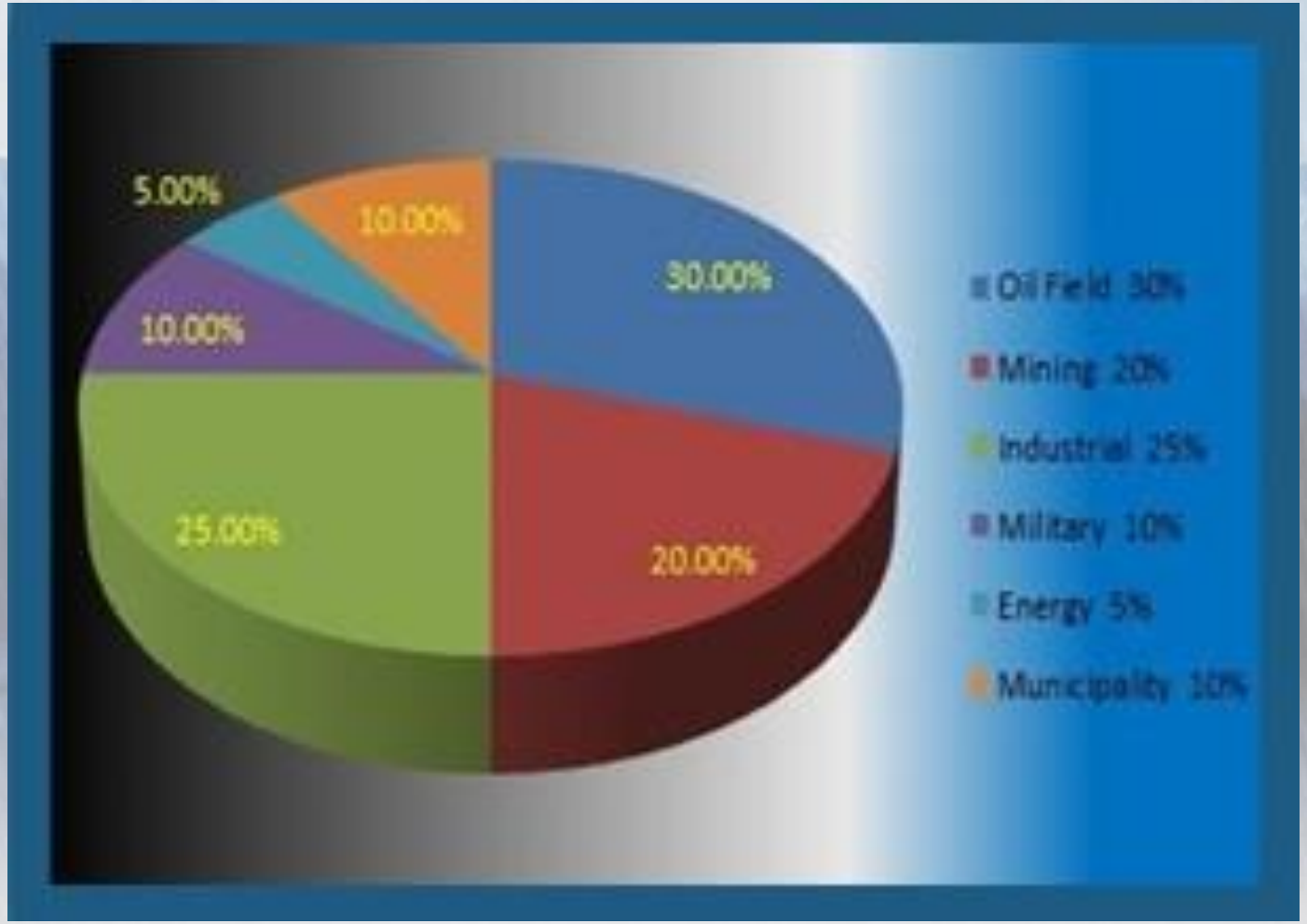
Has Been Successfully Used to:

- Remove BOD, TSS, TDS, FOG, etc., from wastewater before disposal to POTW, thus reducing or eliminating discharge surcharges
- De-water sewage sludge and stabilize heavy metals in sewage, lowering freight and allowing sludge to be land applied
- Condition and polish drinking water
- Remove chlorine and bacteria before water discharge or reuse

EC UNIT
Plant Operation

EC Usage

Wastewater Industry Sectors



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Clear Water = Water Quality = Liquid Life