



**Eco Safeway**

"Safe Cleaning Solutions"



**PREVENTATIVE  
MAINTENANCE**

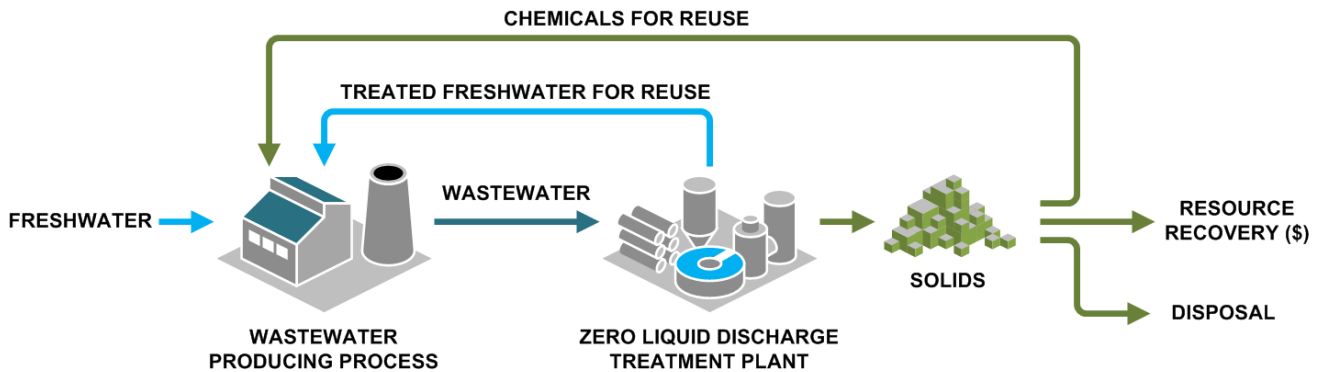
Save Energy, Equipment, & the Environment

## Waste Water Treatment Solutions



### **Eco Safeway's Bio Dose Wastewater Treatment Inoculator:**

Waste Water treatment has to be done right to protect people, facilities and the environment. Water is a precious, abundant yet limited resource depending on your location, so we need to make the most out of what we have and offer the best waste water treatment, degradation and reclamation processes possible to benefit residents, businesses, municipalities and the community as a whole.



Protect people, equipment and the environment with eco-friendly and effective waste water treatment solutions such as **Eco Safeway's Bio Dose and Bio Digest**. Achieve maximum performance in your wastewater treatment facility! We recommend using both Bio Dose and Bio Digest in concert, due to their complimentary beneficial bacterial attributes. **Bio Dose is a big bang bacteria liquid treatment for your facility available with automatic dispenser and Bio Digest builds up powerful bacteria cultures even in anaerobic environments.** Bio Digest Tablets and Sachets are convenient and super for dispersing powerful waste eating bacteria. They work better together and so do we!

**Descaling Your Waste Water Treatment Facility:** When descaling your waste water treatment pipes, pumps and valves, don't kill the beneficial bacteria ('bugs') or your equipment with corrosive acids which unfortunately is still a common cleaning method in waste water treatment; Instead use Eco Safeway's non-corrosive and effective commercial/industrial descaler to quickly and safely dissolve struvite buildup in your facility like sugar in coffee. Keep your facility flawless and your equipment and personnel safe and clear.

### Why Bio Dose?

Eco Safeway's Bio Dose Inoculator is tailor made for waste water treatment facilities; this **highly concentrated liquid bacterial inoculator** is comprised of complex bacterial cultures, hand selected for maximum strength and degrades a gamut of the toughest and most obstinate organic substances. Bio Dose bacteria cultures are hand picked for their **specific waste eating appetites, reactivity and longevity**. Bio Dose performs a variety of wastewater treatment functions and will degrade standard wastewater organics as well as oxidize various problematic waste compounds issuing from the pollution sources of commercial and industrial facilities.

Large or small, Bio Dose degrades myriad wastewater elements and stubborn organic compounds including those commonly present in industrial and agricultural wastewater runoff. Our Bio Dose formula contains the best 'bugs' available with billions of live bacteria cultures hand selected by scientists to offer the highest performance formula which is robust and efficient in achieving constant degradation of industrial wastewater.

**Bio Dose is a truly superior and effective eco-friendly waste water treatment.** The proof is in the performance. Get the most out of your wastewater treatment with Bio Dose. See the results of superior mitigation of problem waste such as oils, grease, priority pollutants, noxious odors and unexpected spills due to inhibitory organics.

**Eco Safeway's Bio Dose inoculator** consists of specially designed, naturally occurring strains of rich bacteria cultures such as 'Pseudomonas bacteria' which have been selected for their ability to oxidize specific stubborn problem organics often encountered in wastewater treatment systems.

Examples of some of these stubborn wastes are show below.

Long-chain linear aliphatics- Nutrients-

Short-chain aliphatics- Branched aliphatics- Chlorosubstituted aliphatics- Aromatics-

Chlorosubstituted aromatics-

e.g., grease, cooking oils, petroleum hydrocarbons e.g., ammonia/nitrogen

e.g., hexane, octane

e.g., isoprenols

e.g., chlorobutadiene

e.g., benzene, phenols, naphthalene, toluene

e.g., 2, 4, D, chlorotoluene, mono-and disubstituted

chlorophenols and Chlorotoluenes

Bio Dose has been used successfully in a wide variety of wastewater treatment such as food processing plants, chemical and petroleum industries and more. Proven results range from specific reduction of targeted organics such as grease, oil, and priority pollutants, to more general BOD, TSS, nutrient level, and odor reduction. The degree of impact of Bio Dose may vary depending in the application and quantities used, however, Bio Dose will show positive effects on wastewater operating parameters.

**Bio Dose bacteria** are selected for their specific waste eating appetites as well as hardiness; and will not only degrade routine wastewater organics, but also oxidize

many problem wastes generated by commercial and industrial contributors. The result is a significant reduction of problem grease and oils, priority pollutants, noxious odors and unexpected upsets due to inhibitory organics.

### **Bio Digest: Powerful Aerobic and Anaerobic Performance:**

Bio Digest has all of the aggressive eco- friendly performance and degrading properties of Bio Dose but in a powerful powder form boasting **both aerobic and anaerobic growth**; the formula can flourish with or even without oxygen, making it a durable, adaptable bacteria based powerhouse to eat up all your wastewater treatment problems.

So don't bug out, let our 'bugs' bust your toughest stuff. This cutting- edge bacteria powder has the power to biodegrade even the toughest stubborn waste and keep your wastewater treatment facility running strong and safe.

# Bio Dose Dosage Recommendations for Industrial Wastewater Treatment

For **Initial Seeding** of Bio Dose to provide quick recovery to acceptable operation parameters in case of a complete upset.

- Use of Bio Dose is recommended for initial seeding in wastewater applications.
- 1 Bio Dose 55 gallon drum is recommended to seed 250,000 gallons of wastewater.

	<b><u>BASIN/POND/DIGESTOR VOLUME (GALLONS)</u></b>	<b><u># OF Bio Dose (55 GALLON DRUM)</u></b>
<u>Up to</u>	250,000	1
	500,000	2
	1,000,000	4
	2,000,000	8
	3,000,000	12
	4,000,000	16
	5,000,000	20

For **Routine Inoculation** of Bio Dose to improve overall efficiency of organic removal, improve settling characteristics and to diminish the effects of shock upsets.

- Using the flow rate of the system calculate the **Gallons of Flow per Day (GPD)**.

Align the total **GPD** with the appropriate Retention time to determine the gallons of **Bio Dose** to add per day.

### Gallons of **Bio Dose** Required Per Day

#### RETENTION TIME (DAYS)

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
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<b>50,000</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>100,000</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>200,000</b>	<b>8</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>500,000</b>	<b>20</b>	<b>10</b>	<b>7</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>750,000</b>	<b>30</b>	<b>15</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>
<b>1,000,000</b>	<b>40</b>	<b>20</b>	<b>13</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>
<b>2,000,000</b>	<b>80</b>	<b>40</b>	<b>27</b>	<b>20</b>	<b>16</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>8</b>
<b>5,000,000</b>	<b>200</b>	<b>100</b>	<b>67</b>	<b>50</b>	<b>40</b>	<b>33</b>	<b>29</b>	<b>25</b>	<b>22</b>	<b>20</b>

## Bio Digest Dosing Parameters: Industrial Wastewater Treatment Systems

### 1 Million gallons of daily flow:

Initial dosing: 25 lbs / 1 million gallons of daily flow Maintenance: 1 lb / day per million gallons of daily flow

### 100,000 Gallons of daily flow:

Initial dosing: 2.5 lbs / 100,000 gallons of daily flow Maintenance: .5 lbs / day per 100,000 gallons of daily flow

### Pond Treatment

Apply 4-6 pounds of Bio Digest per surface acre of water.

Repeat every 2-4 weeks with a 2 pound application or as needed for maintenance

