

Understanding the Pros and Cons of Drain & Wastewater Solutions

Many products continue to enter the marketplace that claim effectiveness when used in waste systems. Waste systems could be drain lines, sewer lines, grease traps/interceptors, lift stations, septic tanks, and holding tanks. Fats, oils and greases (F.O.G.'s) build up in these waste systems and cause undesirable conditions such as odors, blockages and costly removals. F.O.G.'s can be found in restaurants, resorts, commercial properties, industrial properties, grocery stores, airports, hospitals, food processing plants, car washes, automotive stations, single-family homes, apartment complexes, high-rise residential properties and many more.

Your Pains

Waste systems serve as a carrier to move different types of organics, objects and waste downstream ultimately to a municipal treatment plant. As these objects move down-line within your waste system, organics accumulate, bind to each other and ultimately begin sticking to the sidewalls of your drains, traps, interceptors, lift stations and holding tanks. You do not realize this phenomenon is occurring until it is too late where emergency treatments or costly mechanical methods are required to remove accumulated F.O.G.'s from your waste system.

Your Options

There are a myriad of products available that claim effectiveness against F.O.G.'s and, for the customer, it is extremely difficult to decide which option is best. Do I use an extremely caustic product to clear my drain? Do I throw enzymatics down the drain? Do I add bacteria? We break this down simply for you describing the Pros and Cons along the way.

The UGLY

Chemical Based Products. Pros

(1) Products with high pH (alkaline) or low pH (acidic) are effective at breaking down accumulation and are typically used only for emergencies and not routine maintenance. **Cons:** (1) They disturb the natural biologic environment within your system killing any bacteria that is present, (2) They are difficult on your waste system infrastructure, (3) They are typically harmful to humans using them, (4) A reactive "crisis

management" program resulting in outages, shutdowns and added expense, (5) Effectiveness is short-lived with no long-term maintenance effect, (6) Required continued use is not cost effective.

Mechanical Methods. Pros

(1) System jetting and/or "snaking" is effective at removing accumulation used typically for emergencies and not routine maintenance. **Cons:** (1) Costly, (2) A reactive "crisis management" program resulting in outages and shutdowns.

The BAD

Enzyme Products. Pros

(1) Products utilizing enzymes are effective at breaking down accumulation. **Cons:** (1) Can not be used in hot temperature environments or the enzymes will be diluted, (2) Enzymes containing aerobic cultures will immediately die in low oxygen zones, (3) Enzymes are not living organisms. They only break down substrates. They do not consume and do not reproduce adding labor and product expense due to required maintenance frequency and the large number of enzymes needed to be effective, (4) Since enzymes don't consume, F.O.G.'s are only liquified resulting in re-solidification downstream in your system, (5) Selection of enzymes for your waste system is complex and subjective resulting in a limited and narrow program, (6) Most municipalities do not authorize use due to potential treatment plant disruption as a result of a pH shift or the introduction of the wrong enzyme, (7) Limited effectiveness in grease traps/interceptors, lift stations and collection systems, (8) Enzyme count significantly lower (less than 500 billion microorganisms) than that required for effectiveness, (9) Enzymes are removed from the system as they break down substrates requiring significant quantities re-introduced regularly into the waste system, (10) There are many waste systems where artificial enzymes contribute nothing due to the need to match enzymes to your specific waste.

The GOOD

Encapsulation Products. Pros

(1) Products with encapsulation allow existing bacteria within your waste stream to more effectively break down waste, (2) Can be used in hot temperature environments up to 200 degrees, (3) Biological environment is enhanced, (4) Provides desirable food source for bacteria to thrive, (5) Waste

no longer sticks to themselves or to sidewalls of your system, **(6)** A proactive solution to avoid blockages, shutdowns and outages, **(7)** Neutral pH technology.

Cons: (1) Less effective in environments where bacteria isn't present.

Bacteria Products. Pros

(1) Bacteria produce their own enzymes to break down waste and finish the job by digesting the waste, **(2)** We specifically utilize anaerobic and facultative bacteria to remain effective in low oxygen environments, **(3)** Bacteria naturally digest your waste and release H₂O and CO₂ into the environment without the addition of artificial enzymes, **(4)** Bacteria are living organisms and can adjust to the different types of waste around them, **(5)** Bacteria will continue to reproduce and produce their own enzymes resulting in a far greater number of enzymes in your waste system than can be achieved with an artificial enzymatic product, **(6)** Bacteria will continue to consume the waste present, **(7)** Bacteria is more stable in a broader pH and temperature range than enzymatic products. **Cons: (1)** Bacteria is sold in spore form and need time (several hours) to attack accumulation in the waste stream, **(2)** Not effective in emergency waste stream blockages.

NewEraSOS DRAIN & WASTEWATER SOLUTION

NewEraSOS has over 30 years experience in waste system management where maintaining an efficient biological environment is our focus to ensure lower labor and product costs without compromising system performance. The use of chemical based products, mechanical methods of removal and the injection of enzymatics into your waste system are proven costly over time and do not enhance the natural biological process within your system. The result – A constant “yo-yo” effect where waste is not efficiently consumed, digested and removed efficiently.

Our goal is to educate and deliver you time-proven solutions that are sustainable over the long run. All while reducing labor costs, product costs and nuisance emergency calls to the nearby jetting company or pumping company. We utilize a combination of encapsulation, bioremediation and biostimulation products to handle all of your drain and waste system needs. We have a simple yet effective lineup of products along with a list of our most-used programs.

NewEraSOS Program. Pros

- Versatile products for drain lines, grease traps/interceptors, lift stations, collection lines, floors, fruit flies, drain flies, restrooms, outdoor surfaces, trash/dumpster sites, and above ground surfaces
- Reduce labor and product costs while maintaining efficient biological system
- Can be used in hot temperature environments (utilize our products at the source of F.O.G.'s – your dishwasher drain and sinks)
- Eliminate routine jetting of drain lines
- No need to pump grease traps and interceptors more often than that required by municipality
- Enhance performance of existing bacteria creating a sustainable system
- Maintain a stable pH environment throughout your waste system
- Adaptable programs and solutions to handle all waste system needs

Our Process

Allow bacteria and the enzymes they produce to work hand-in-hand to consume waste resulting in more safe bacteria, water and carbon dioxide as the byproducts of digestion.

Level 1 BioRemediation with Encapsulation

Encapsulate Bacteria and Waste - F.O.G.'s no longer stick to themselves or the sidewalls of your system - Biostimulants within the formulation allow supercharge existing bacteria to naturally produce enzymes required to break down your waste - Bacteria remains efficient to digest waste and release H₂O and Co₂ to the environment.

Level 2 BioRemediation with Bacteria

Introduce Bacteria to Level 1 Maintenance Program where excessive hydrocarbons, greases, phenols and F.O.G.'s are present.

Level 3 BioStimulation

Introduce Biostimulants to Level 1 & 2 Maintenance Programs
