

## OZONE & WASTE WATER TREATMENT GUIDE

### COD removal with Ozone

- Complete oxidation from inert COD to CO<sub>2</sub>
- Cracking of COD → inert organic molecules are cracked into smaller molecules which consequently become biodegradable

$$\text{COD}_{\text{TOTAL}} = \text{COD for Total Organic} + \text{COD for Inorganic}$$

High **Ozone** dosage – COD oxidised to CO<sub>2</sub> – 2g to 5g Ozone/1g COD removed

Low Ozone dosage – COD transformed into BOD – 0.7g – 1.5g Ozone/1g COD removed

### Ozone in Waste Water Treatment

#### Pre-ozonation

Pre-treatment to remove toxic substances like Phenols, Cresols, etc.

#### Sludge treatment

To improve sludge disintegration and improve sludge reduction

To eliminate filamentous bacteria and reduce SVI (Sludge Volume Index)

#### Final ozonation

Removal of endocrine disruptors

Elimination of inert COD

Color/odor removal

Disinfection

Removal of other substances like Phenols, etc.

*\*Please note this is a guide only and is not to be used for definitive purposes without consultation*