



# Optimizes the Sludge Treatment Process Like No Other System

## The Affordable Option Giving All Plant Sizes the Ability to Control Struvite and Recover Phosphorus

MagPrex turns struvite into an opportunity for resource recovery. In wastewater reclamation plants with Biological Phosphorus Removal (BPR), phosphorus accumulates in sludge and releases soluble phosphorus (PO<sub>4</sub>-P) in an anaerobic condition. Elevated soluble phosphorus levels in sludge causes operational challenges.

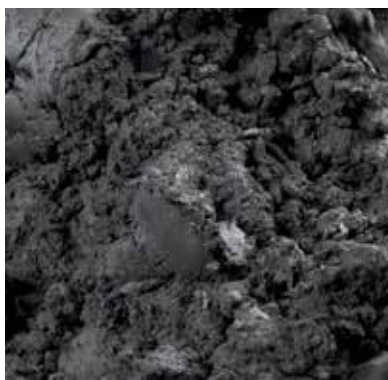
- Form struvite by stripping out CO<sub>2</sub>, elevates the pH and adds MgCl<sub>2</sub> to augment Mg<sub>2</sub>+
- Install between the anaerobic digester and the dewatering equipment
- Convert the orthophosphate into struvite crystals with two recovery options:

### Harvesting



Struvite crystals are removed from the digested sludge and used as a beneficial fertilizer

### Sequestration



Leave the struvite crystals in the sludge

## THE BENEFITS

MagPrex Removes Struvite while Significantly **Improving Treatment Efficiency**



Reduce Polymer Consumption up to **30%**



Reduce Disposal Costs up to **20%**



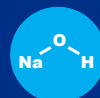
Reduce Phosphate Recycle Load up to **90%**



Reduce Maintenance Costs up to **50%**



Increase Revenue from Fertilizer up to **20%**

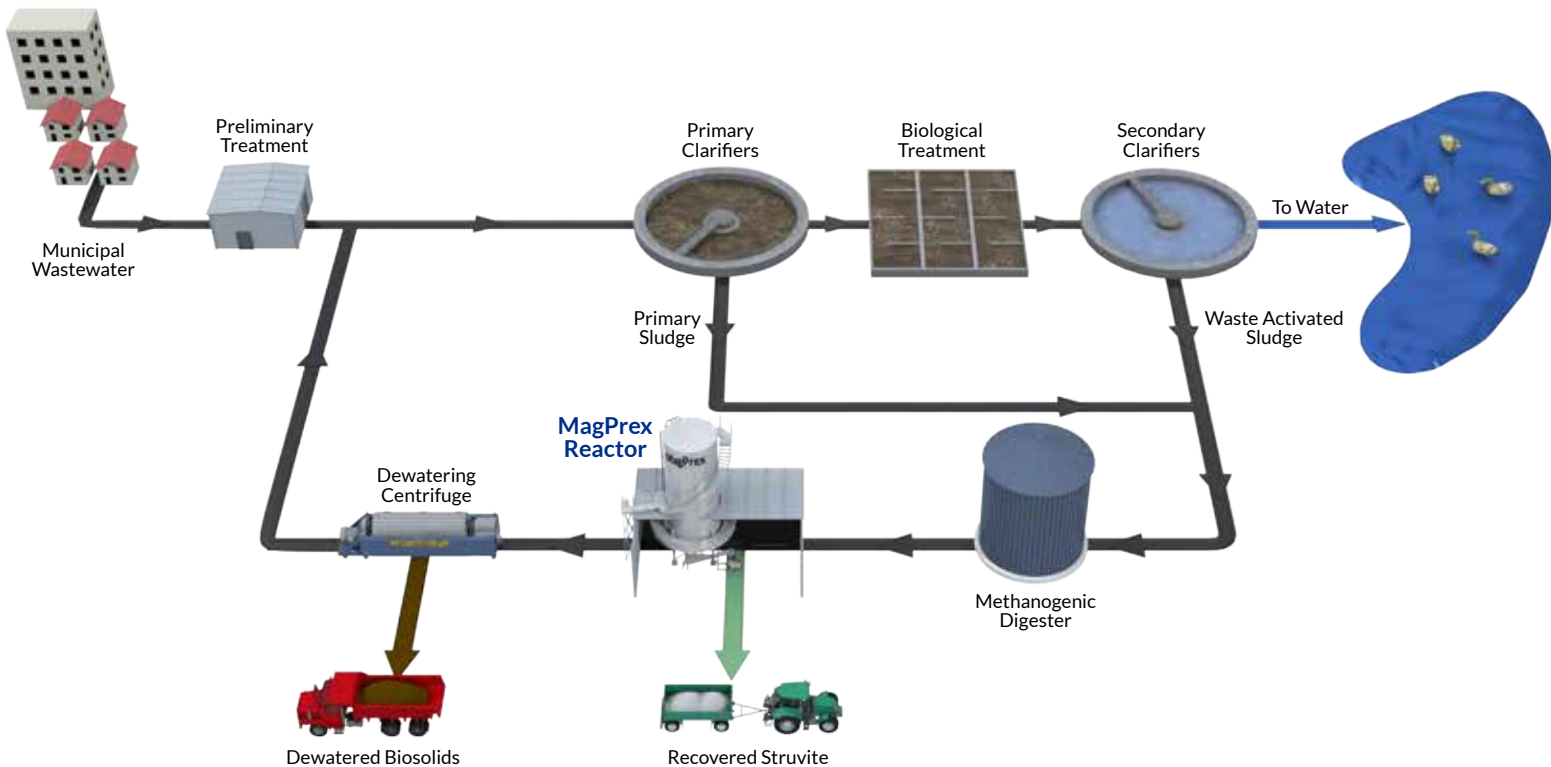


**No** Sodium Hydroxide Required



# PROCESS: MagPrex™

Changing our nutrient recovery technology's name to MagPrex (formerly AirPrex) signifies our commitment to continued innovation for all our North American customers.



|                                      | Centrate Recovery | WAS Fermentation + Centrate Recovery | MagPrex™ |
|--------------------------------------|-------------------|--------------------------------------|----------|
| Reduce Phosphorus Recycle            | ✓                 | ✓                                    | ✓        |
| Recovery of Marketable Fertilizer    | ✓                 | ✓                                    | ✓        |
| Reduce Struvite Maintenance          | ✓                 | ✓                                    | ✓        |
| Improve Sludge Cake Dryness          | ✗                 | ?                                    | ✓        |
| Reduce Polymer Demand                | ✗                 | ?                                    | ✓        |
| No Recovery Option (Sequestration)   | ✗                 | ✗                                    | ✓        |
| Cost Competitive for Small Utilities | ✗                 | ✗                                    | ✓        |