

Perma Flux™

Anaerobic MBR - Brignano, Italy

Case Study

Application:	Anaerobic Digestate Thickening	Location:	Brignano Gerra d'Adda, Italy
Capacity:	8,000 GPD	Commissioned:	2019

Challenge:

Chicken manure is a free, readily available source of nutrients for anaerobic digesters. The digestate ingests the feed and forms a mixture that is extremely high in COD, TSS, and nutrients. This difficult-to-treat water needs to then be filtered and the solid and liquid portions sent off individually for their own downstream treatments and subsequent uses such as algae growth using the nutrient rich permeate.



Solution:

After a successful pilot study competing against numerous alternate technologies, Thetis was awarded the contract to provide a PermaFlux™ system as part of the complete treatment solution. The solution was comprised of multiple treatment steps including an anaerobic digester, liquid-solid separation facilitated by the use of PermaFlux™ and lastly, dewatering.

PermaFlux™ is pumped influent from the digester which it separates into clean permeate and concentrated sludge. The sludge is then pumped to dewatering to become fertilizer for nearby farms, and the nutrient rich permeate is discharged to ponds to aid in the growth of algae.