Nutrient data monitoring to support decision making

PHORWater

Integral Management Model for Phosphorus recovery and reuse from Urban Wastewater

Nutrient data monitoring to support decision making
1. WWTP process

N, P, other nutrients

N removed as N₂

P to water bodies

SIDESTREAM RETURNS

Primary Setting

PRE AOX ANAEROBIC ANAERObic AEROBIC

Secondary Setting

Mixing Chamber

Secondary Sludge Thickening

SIDESTREAM RETURNS

Primary Sludge Thickening

Sidestream Returns

Sludge Thickening

Secondary Anaerobic Digestion

Anaerobic Digestion

Sludge Dewatering

P recovery

P to sludge
2. Questions

Why do we need data on nutrients?

Evaluate impact of nutrients discharges into the environment.
Evaluate amount of P that can be recovered.
Evaluate effectiveness of new technologies.
Promote researching on nutrients recovery.

Which data do we need?

Amount of P coming into WWTP.
Amount of P going out with the effluent.
Amount of P that could be recovered.
Amount of P lost inside WWTP (uncontrolled precipitation)

What is currently missing.

Lack in P monitoring.
Data hard to find.
No actual data (10 years ago)
3. Conclusion

If we want industry to invest in P recovery we have to be able to quantify and evaluate the benefits of its implementation.

With no regulation why should they invest?