

# WATER TREATMENT TRENDS & REGULATIONS

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# Water Treatment Trends & Regulations



# Phosphorous Removal

- Municipal
  - Public Owned Treatment Works
- Industrial
  - Pretreatment Permit
    - NPDES Permits

# Why Phosphorous Removal?

- Nutrient related pollutant
- Fertilizer to algae in streams
- Inhibits sunlight
  - Photosynthesis
- Small plant life does not grow

# Where Does Household Phosphorus Come From?

- Cleaners and degreasers
- Food products
- Fertilizers
  - Household
  - Farms

# Where Does Industrial Phosphorus Come From?

- Zinc phosphate coatings
- Nickel plating
- Industrial strength detergents
- Paints and coatings

# Where Does Industrial Phosphorus Come From?

- Poultry processing
  - Phosphorous
  - Ammonia



# Municipal Treatment Schemes

- Biological treatment process
- Chemical precipitation process
  - Calcium based coagulants
  - Aluminum based coagulants
  - Iron based coagulants

# Facts to Consider

- Most industries can not run biological treatment
- Industry must coagulate-flocculate-precipitate
- Food processing plants do run biological processes
- Municipal systems may do both processes
- Industry local POTW and EPA must work together
- As permits expire, new permits address phosphorous

# What's **HOT**??

- Industry expansion
- Housing rebound

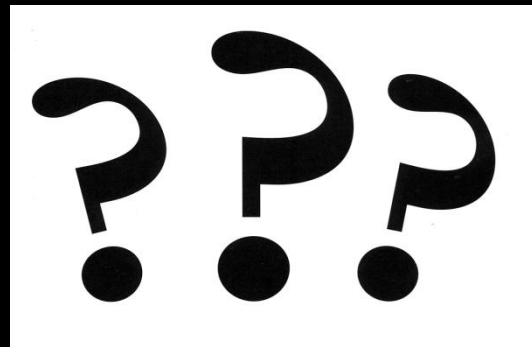


# Facts to Consider

- Work coming back from China
- Work not going to China
- Work not going to Mexico
- We have water!

# Questions Must be Answered

- Will our waste treatment plant meet limits?
- Can the POTW handle our expansion?
- Can the city process enough water?



# Questions Must be Answered

- Does my air permit need an amendment?
  - NESHAP complaint
  - MACT standards
  - VOC emissions
  - HAP emissions
  - Title Five parameters

# Discussion from Dave Taylor

- Industrial Session Chair – *Indiana Partners for Pollution Prevention*
- Board of Directors & Past President – *Indiana Industrial Operators Association*
- President – *A and T Environmental*