Ready to put the puzzle together?
When you think about flooding, what do you think of?

Rivers?
Roads?
Bridges?
Infrastructure?
Fools?
Let’s share a story and do a little detective work

The Setting:

- July 2021
- Starting to recover from over a year of drought conditions,
- It started to rain,
- Big rains,
- Many days of rain,
- Saturated soils etc.
- No named storms

A NH WWTF started to see an increase in volume...

You know where this is going....
What Was Going On?

• Volume in Sequencing Batch Reactor (SBR) tanks were unbalanced and too high
• Operator had to stay through the night to manage the regularity of the system’s SBRs
• During normal flows, he was able to operate SBRs at 3.5 cycles/day
  but during this high flow period he had to go up to 5.5 cycles/day
  along with a gradual decanting off both SBR tanks
  to bring the levels down to where they should be
• Put more water through the plant quicker; in smaller batches
• No visible flooding around the plant???

These solar panels have nothing to do with the flooding
They are just awesome to see on their old lagoon!
Ah ha! Due to infiltration and inflow the WWTF’s volume was increased.
Operator suspects the bulk of the inflow came from a neighborhood in a fairly wet area.
What data would be useful in figuring this out?

What might be a good remedy?

Data points to gather:
• Do these homes in the low lying area have sump pumps?
• Are there other illicit connections?
• Is there unknown infiltration?
• Has this happened before?
  • What were the conditions when it did?
  • Ask the eldest (and wisest) operator!
How Can You Make a Business Case for a Remedy?

Fixing the inflow
• Install a hard line to direct sump pump flow away from plant?
• Identify potential illicit connections?
• How do you convince the public to pay for this?

Fixing the infiltration
• Use a CCTV to scan the sewer pipes?
• Increase sewer maintenance; vac truck?
• Have a liner blown into the sewer pipes?
• Replace private service connections?
• How do you convince the public to pay for this?

$• Saves the plant energy + money not having to treat clean water
• Prolongs the life of the plant
• Prevents an increase in user fees
• Decreases need to upgrade the plant