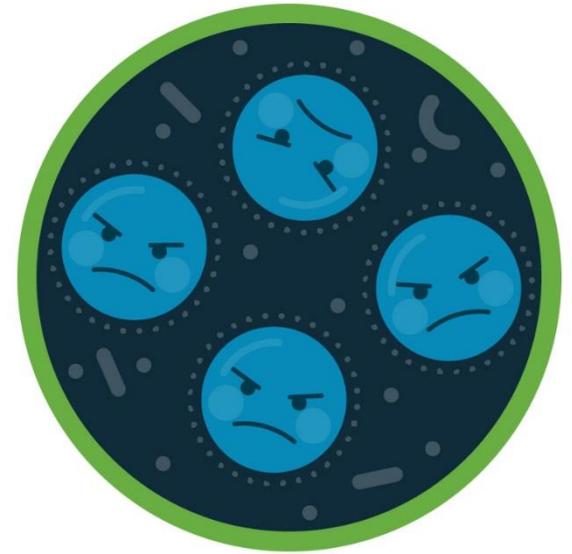


# *Cryptosporidium*



**Dr Donna Evans**

Catchment Customer Acceptability Scientist

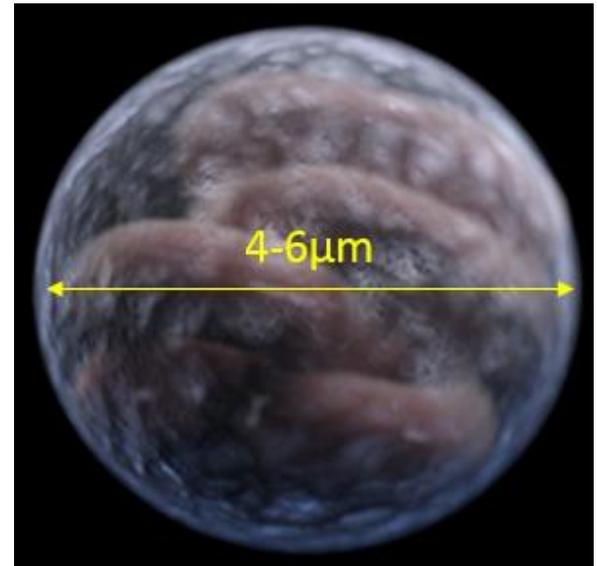
# What is *Cryptosporidium*?

- ◆ “Crypto” is a parasite that can cause illness in humans and animals.
- ◆ Multiple species isolated and named.



# Crypto treatment challenge:

- **Resistant to chlorine**
- **Remove** = coagulation / filtration
- **Deactivate** = Ultra Violet light



# Crypto in the Environment

- ◆ Sources are numerous and varied
- ◆ Prevalence differs widely in the environment
- ◆ Survive for several months
- ◆ Detected in water samples across the world

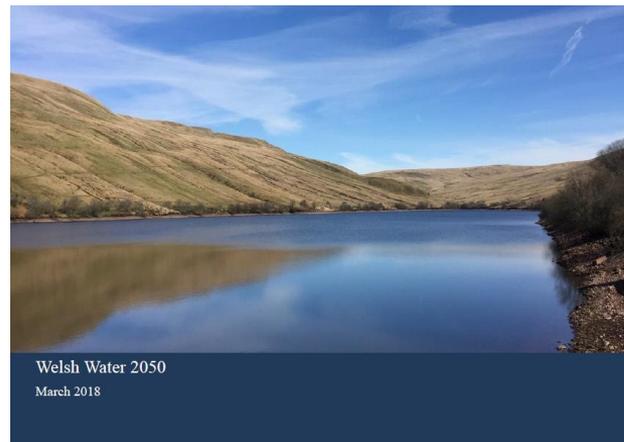


# What does *Cryptosporidium* mean to Dŵr Cymru?

## Strategic Response 1:

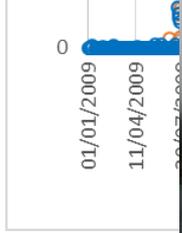
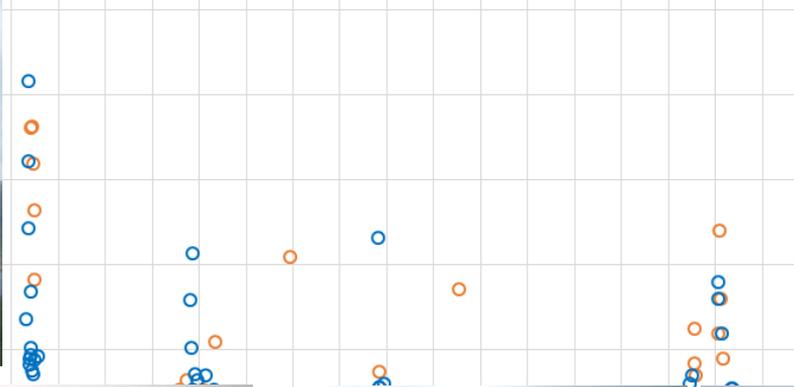
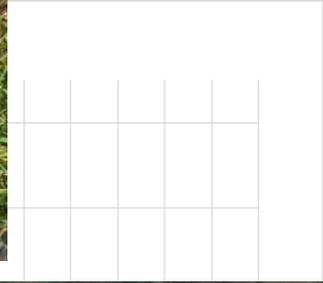
Safeguarding clean drinking water through catchment management.

- ◆ Innovative solutions for reducing the risk of *Cryptosporidium* in a catchment.



## Llyn Cowlyd Investigations





dwrcy

02/08/2018

# ADVANCED MONITORING TECHNOLOGY



- The Cowlyd project is **NOT** just for *Crypto*
- Multi-benefits for Welsh Water 2050
- Cowlyd = SMART Catchments

# Research / Evidence Based Approach to inform Welsh Water 2050

- ◆ Environmental fate of *Crypto*?
- ◆ How long does it persist in the environment?
- ◆ How does it degrade?
- ◆ How far is it transported?
- ◆ Settlement or suspension of *Crypto* in the reservoir?



**Outcome – Can we manage the reservoir to reduce the *Crypto* peaks?**

# Catchment Management Solution Considerations

- ◆ **Should we fence? Add buffer strips?**
- ◆ **Should we manage livestock in the catchment?**
  - remove / reduce
  - influence stock health
- ◆ **Could we try to manage wildlife?**
- ◆ **Other options?**
  - control reservoir dynamics
  - legislation / regulation

