## Freshwater Studies

***- intersex in roach (Rutilus rutilus) in River Lea, North-east London;***

***- oestrogenic effects in fish in River Aire, Northern England;***

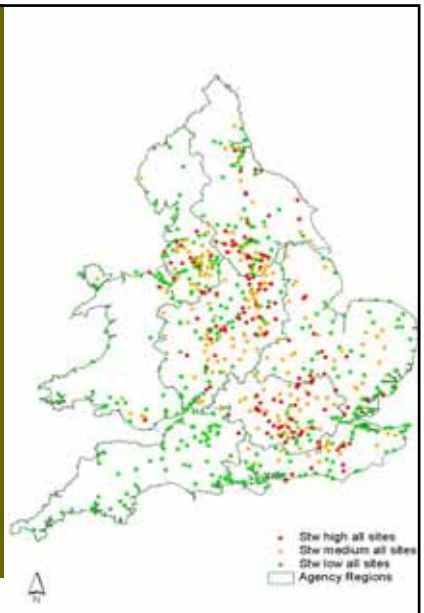
***- feminisation found in gudgeon (Gobio gobio), although to a lesser extent than in roach.***

***- 17 beta-oestradiol, ethinyloestradiol, nonylphenol.***

## *Assessing Risks*

How big an issue is this?

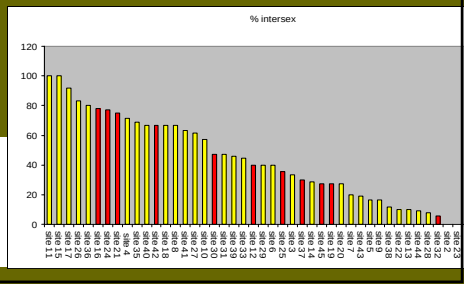
- Prioritise discharges:
  - steroid hazard (PNEC)
  - dilution of effluents (PEC)
  - used database of sewage works >10,000 pe
- identified STW sites:
  - 142 high risk
  - 191 medium risk
  - 132 low risk
- used to target fish survey in 2002/3



## *Risk Assessment - 2002/3 fish survey*

Summary:

- 46 sites; 38 (80%) had feminised male fish
- 40% of  males were intersex
- most sites had greater than 30% incidence
- Intersex, measurable effect in many English Rivers, similar to existing data




## Top Predator Studies – Pike *Esox lucius*