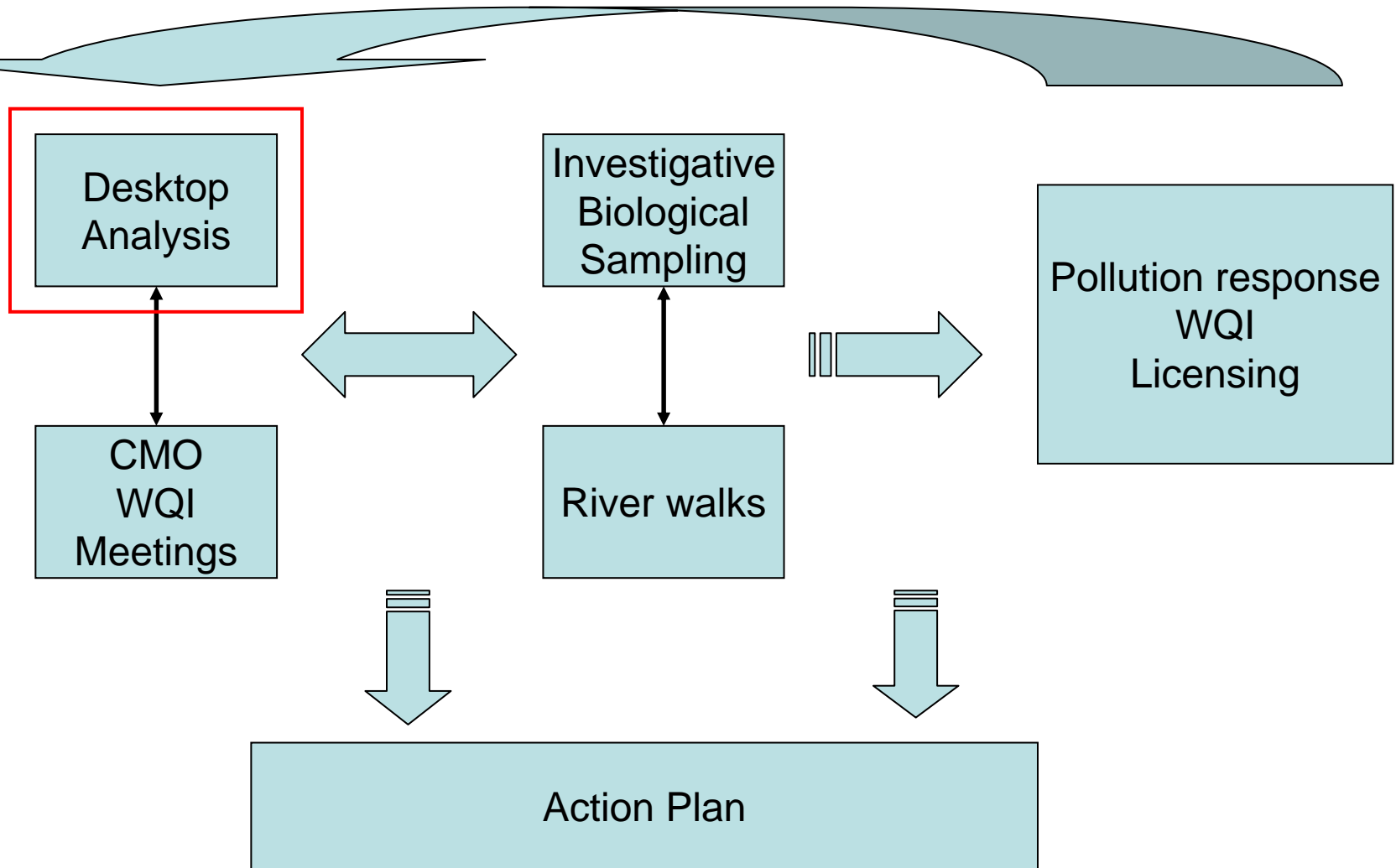




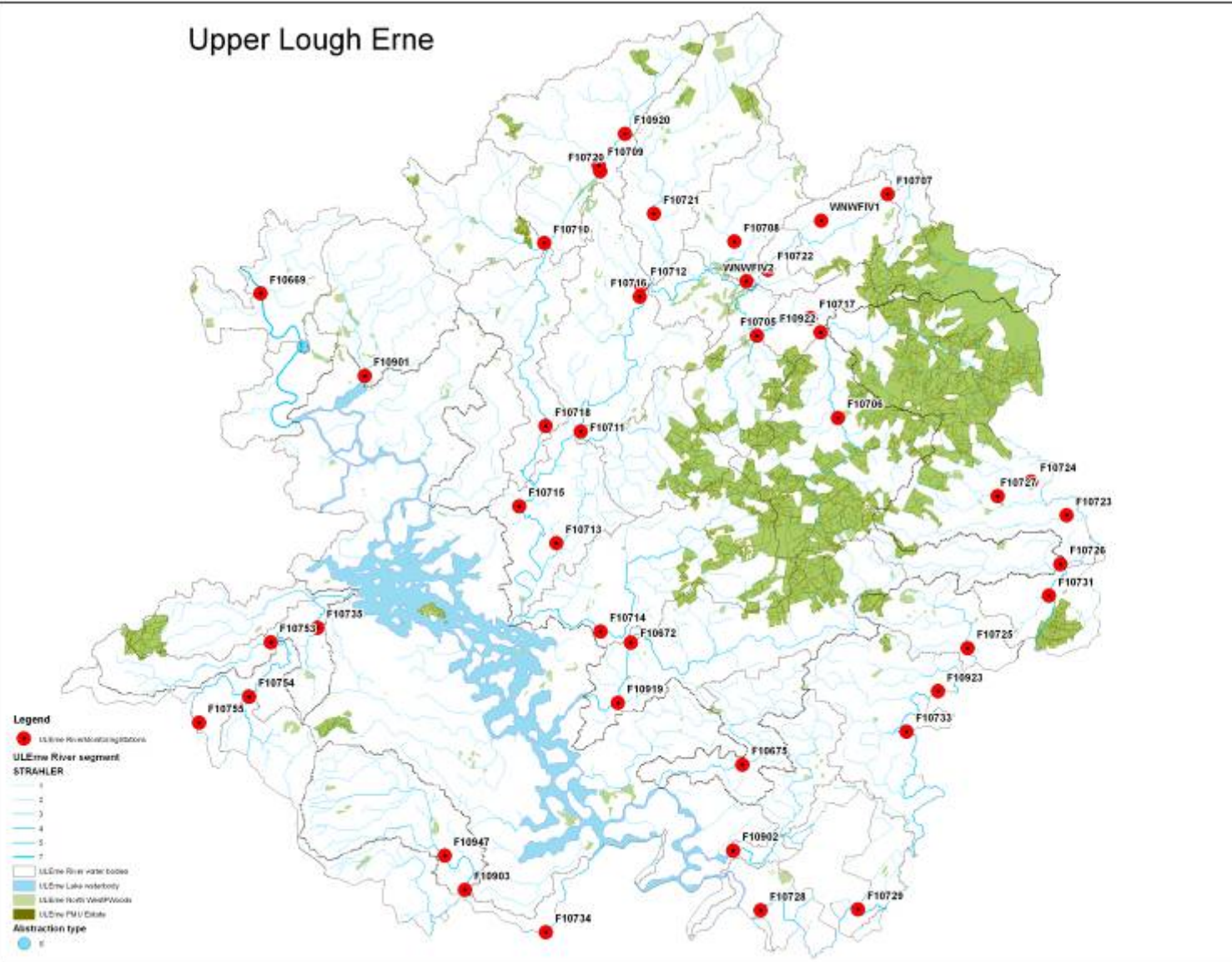
# Catchment Assessment Upper Lough Erne

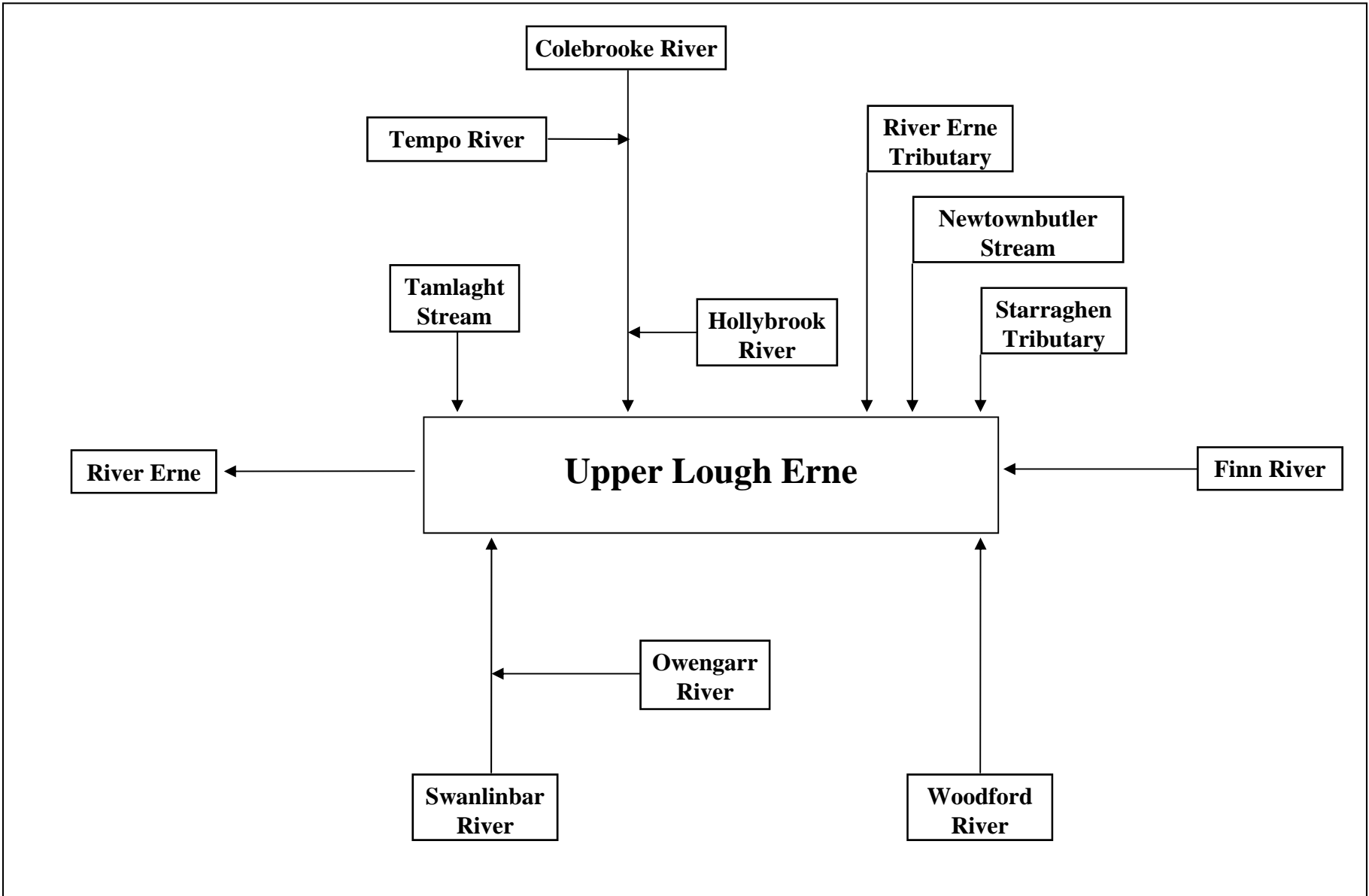
Alvin Wilson 11/10/2011

# Developing Action Plans



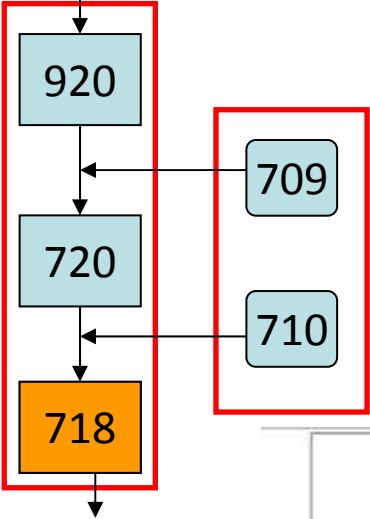
# Upper Lough Erne



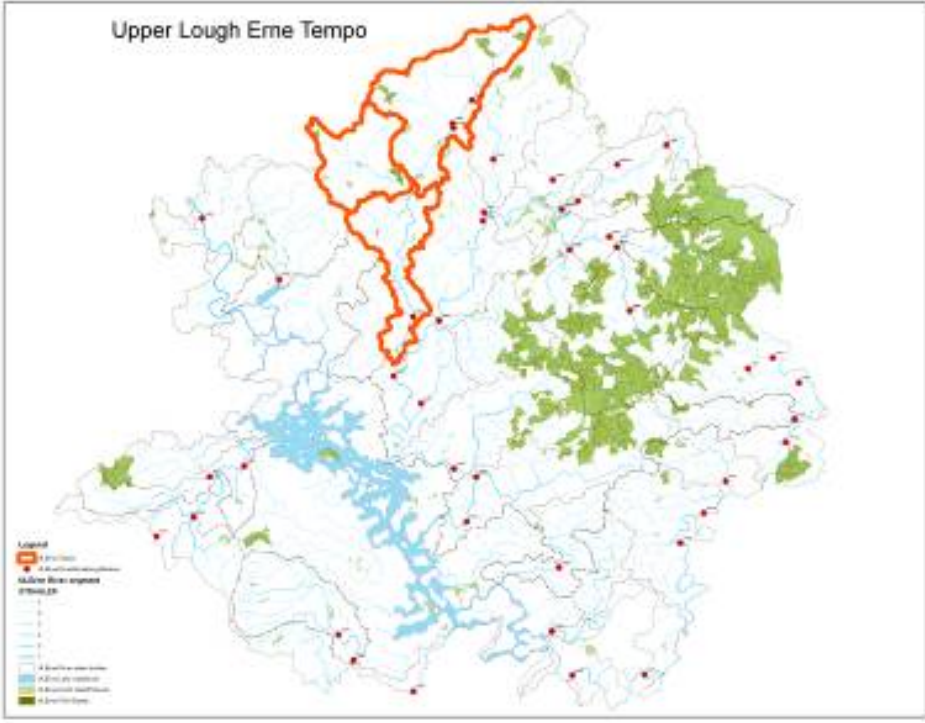
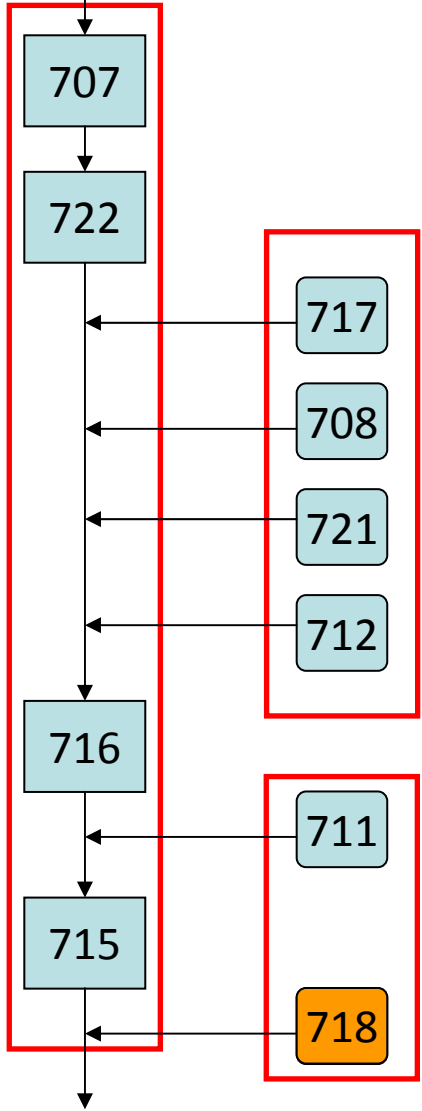


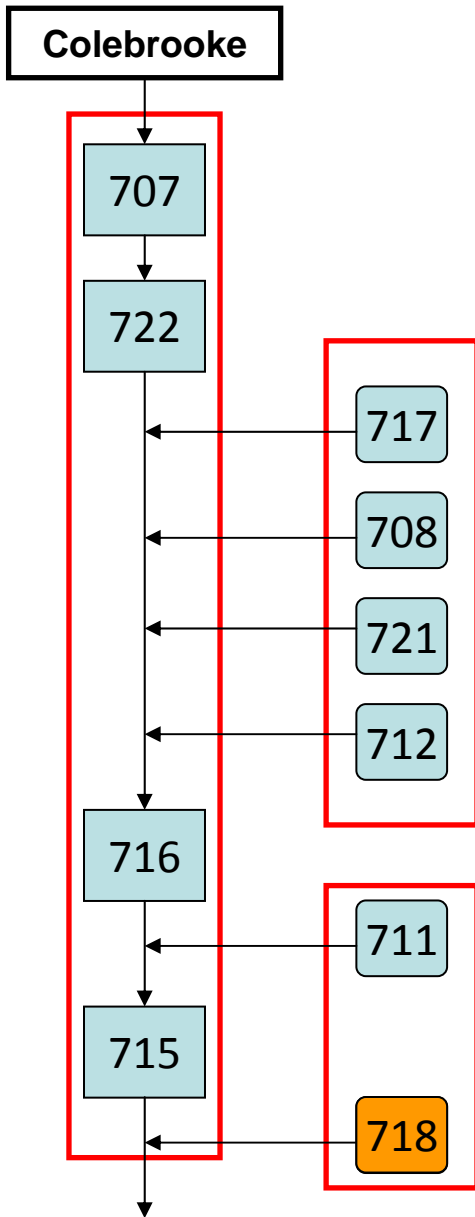
# Colebrooke River Catchment

Tempo



Colebrooke

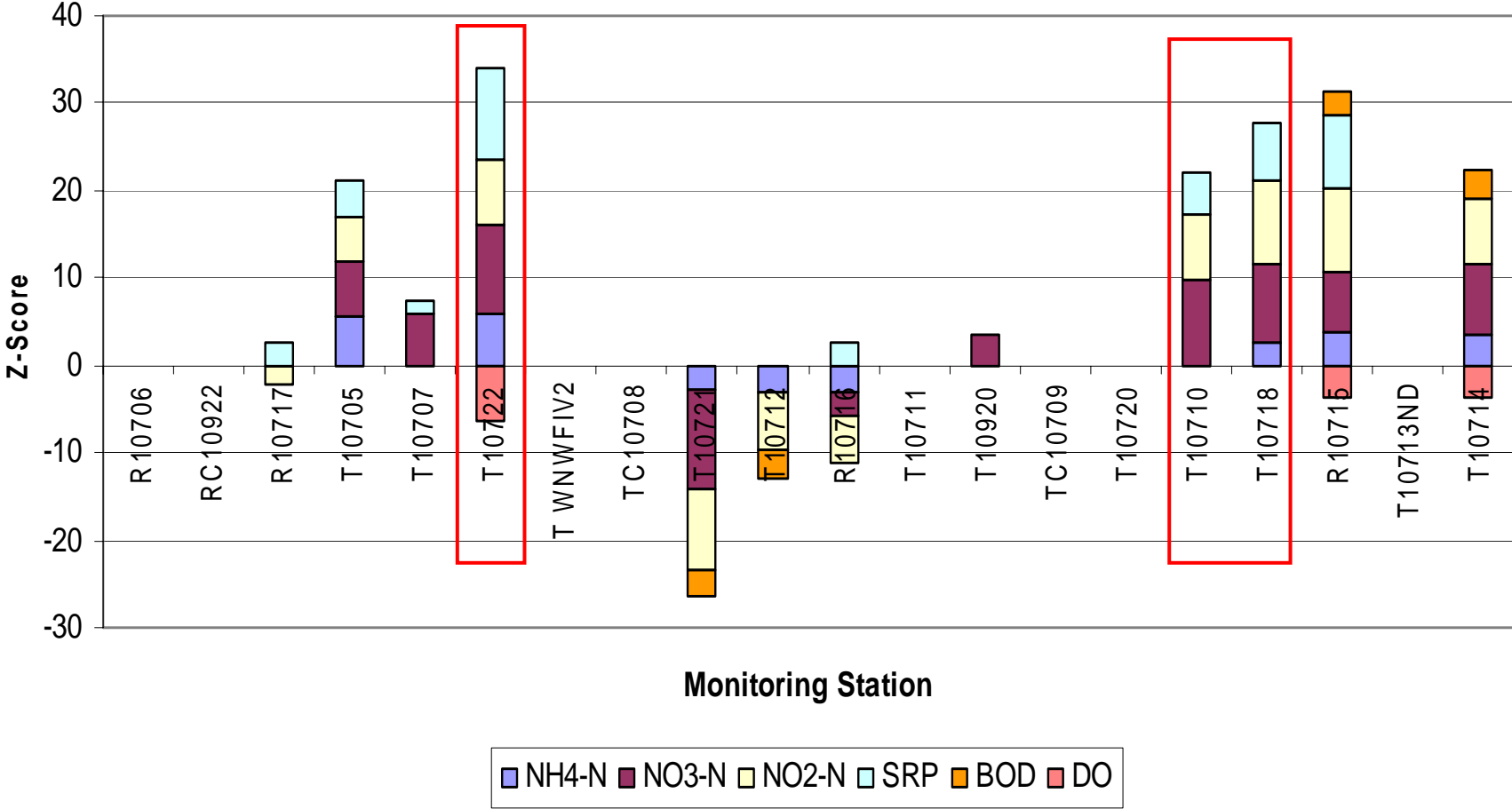




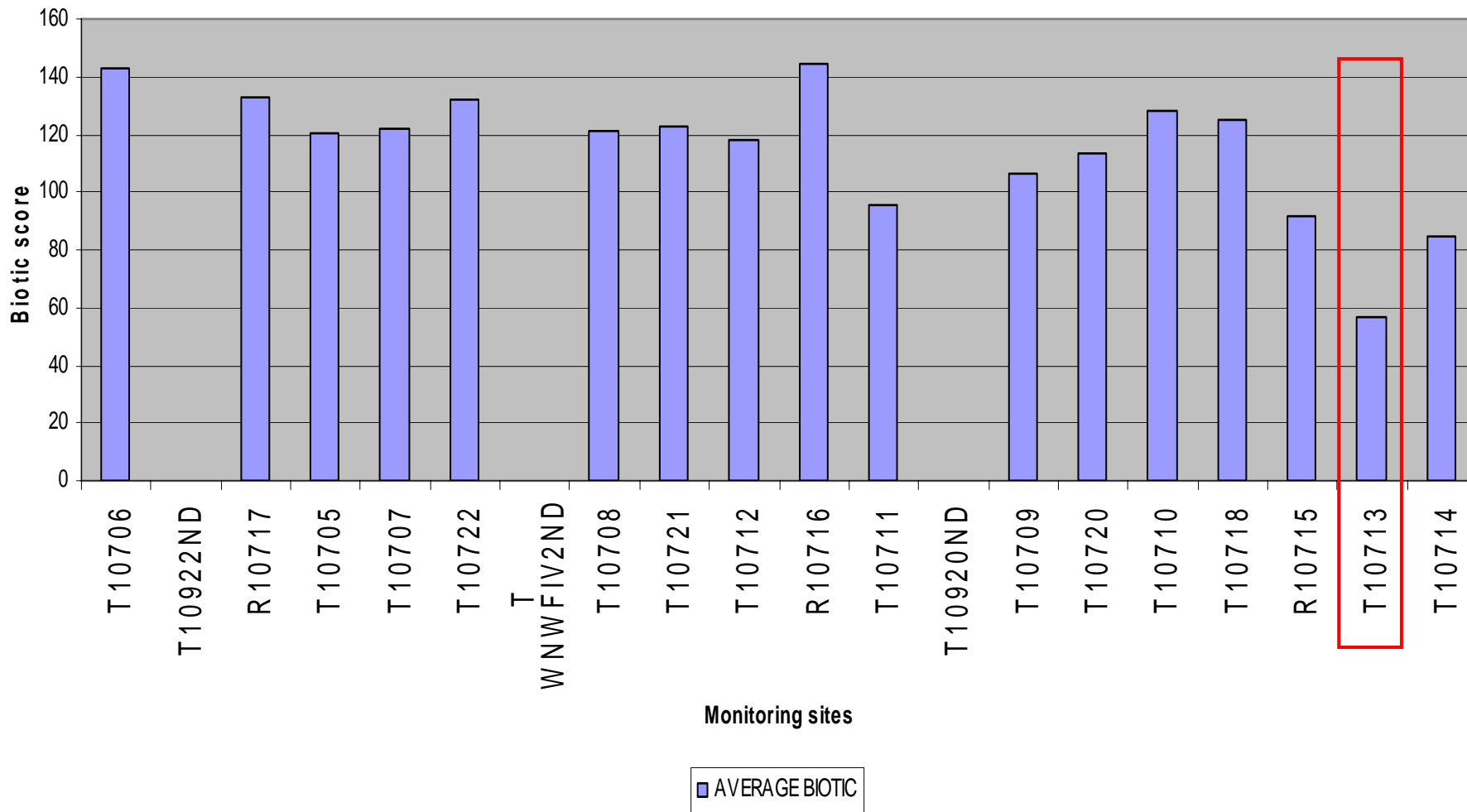
- Trib Group (a)**  
 TC717  
 T708  
 T721  
 T712
- River Group**  
 RC707  
 R722  
 R716  
 R715
- Trib Group (b)**  
 TC711  
 T718

- Analysis**
- |                            |                |
|----------------------------|----------------|
| <b>Chemistry</b>           | <b>Biology</b> |
| Ammonia (NH <sub>4</sub> ) | Biotic score   |
| Nitrate (NO <sub>3</sub> ) | ASPT           |
| Nitrite (NO <sub>2</sub> ) | Taxa           |
| Phosphorus (SRP)           |                |
| BOD                        |                |
| Dissolved Oxygen (DO)      |                |
| Suspended solids (SS)      |                |
| Conductivity (Cond)        |                |
| Alkalinity (Alk)           |                |
| pH                         |                |
| Copper (Cu)                |                |
| Zinc (Zn)                  |                |

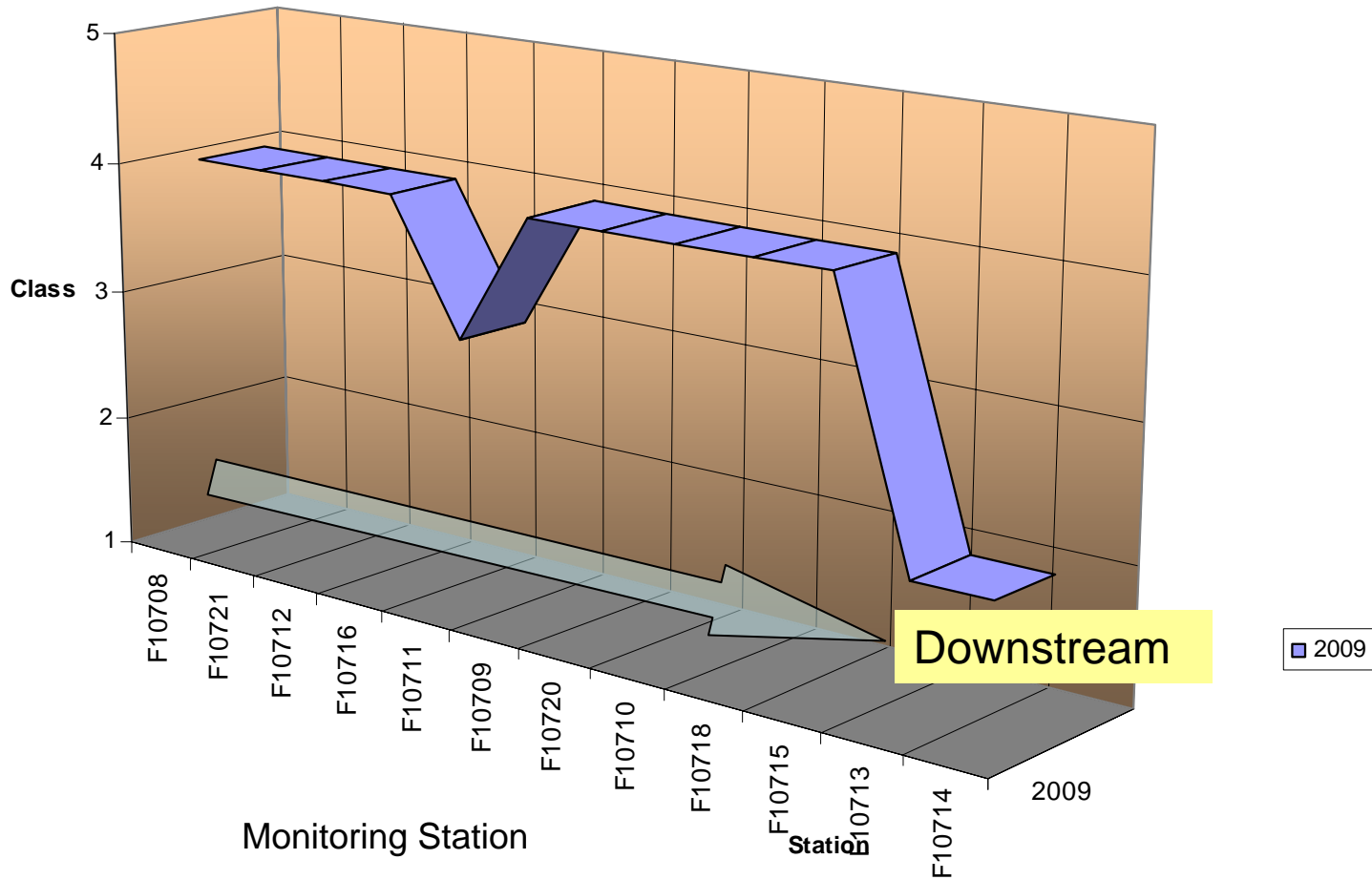
### Colebrook & Tempo River Chemical monitoring Effect size



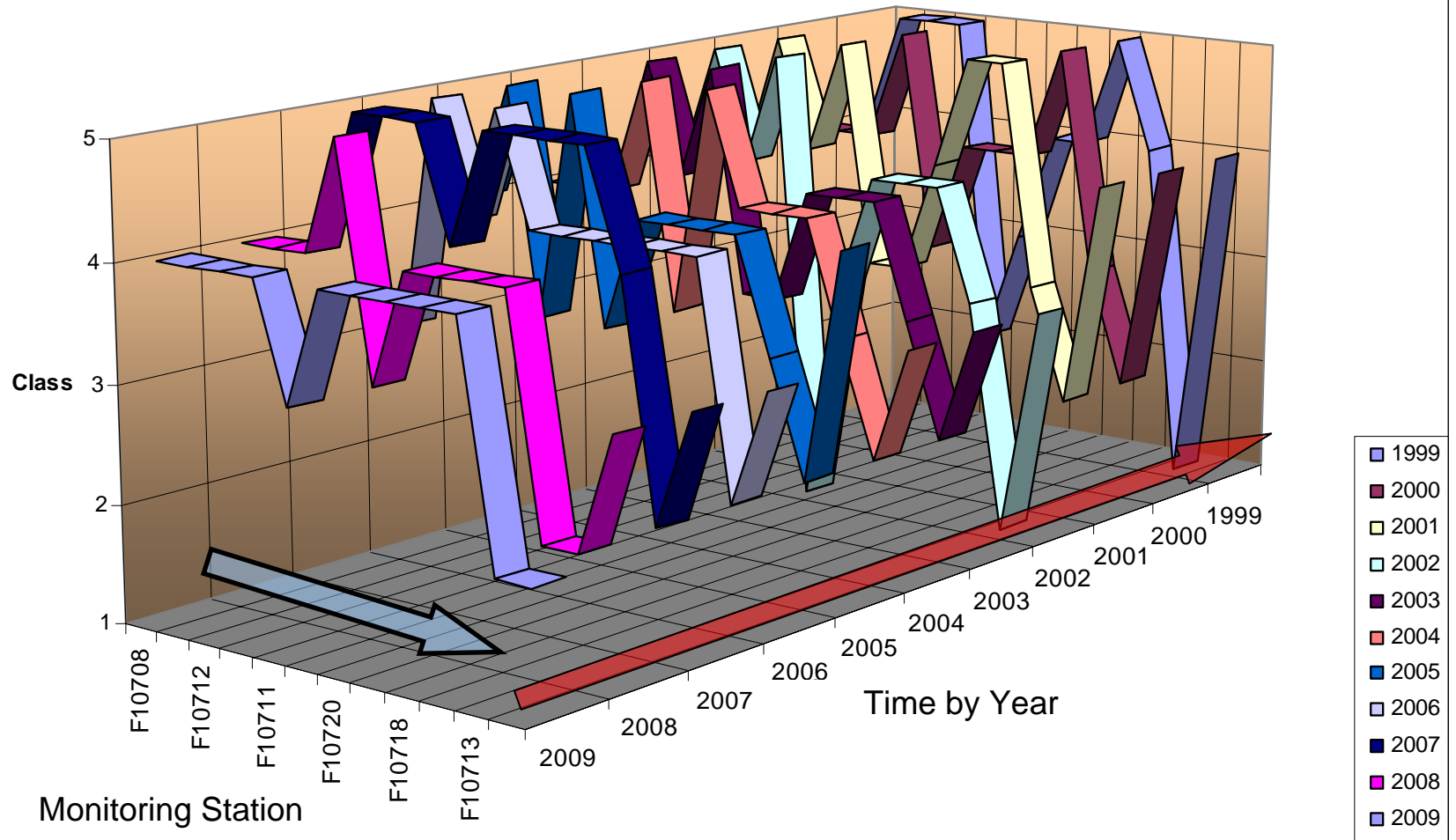
# ULERNE Biology 2006-2008



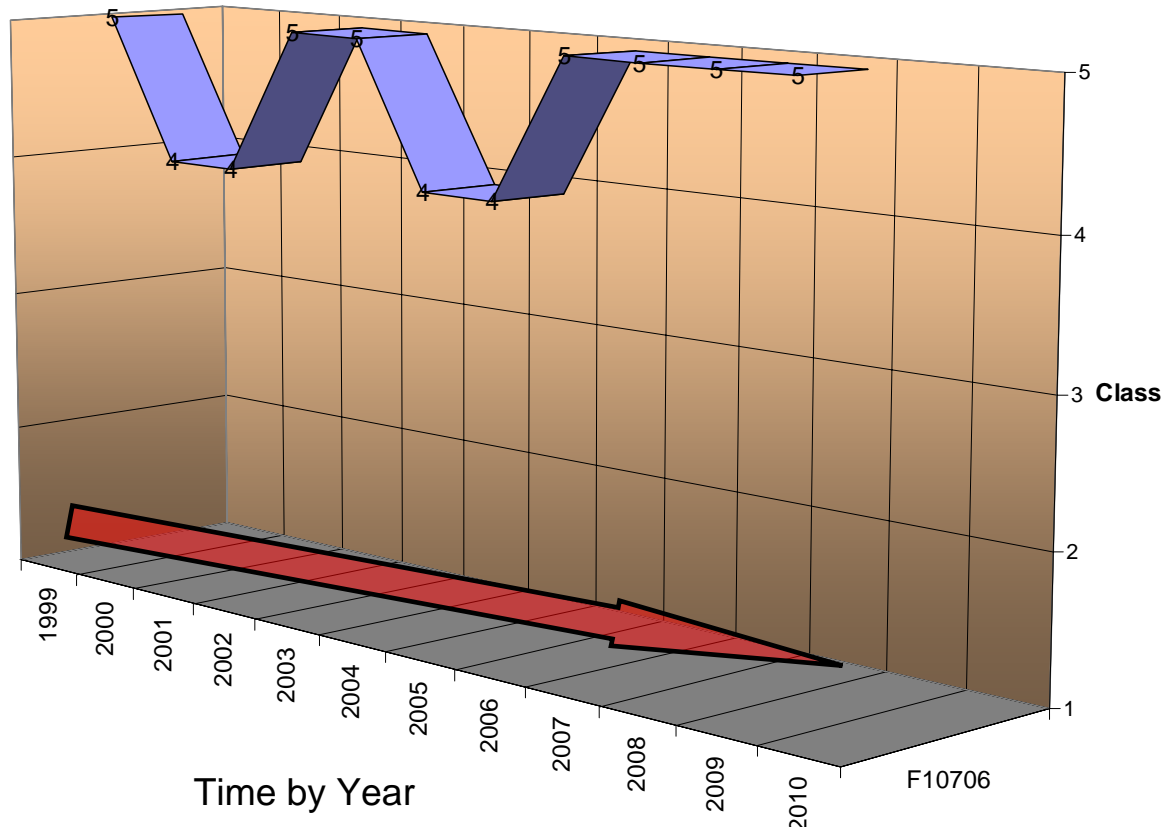
# Colebrooke River



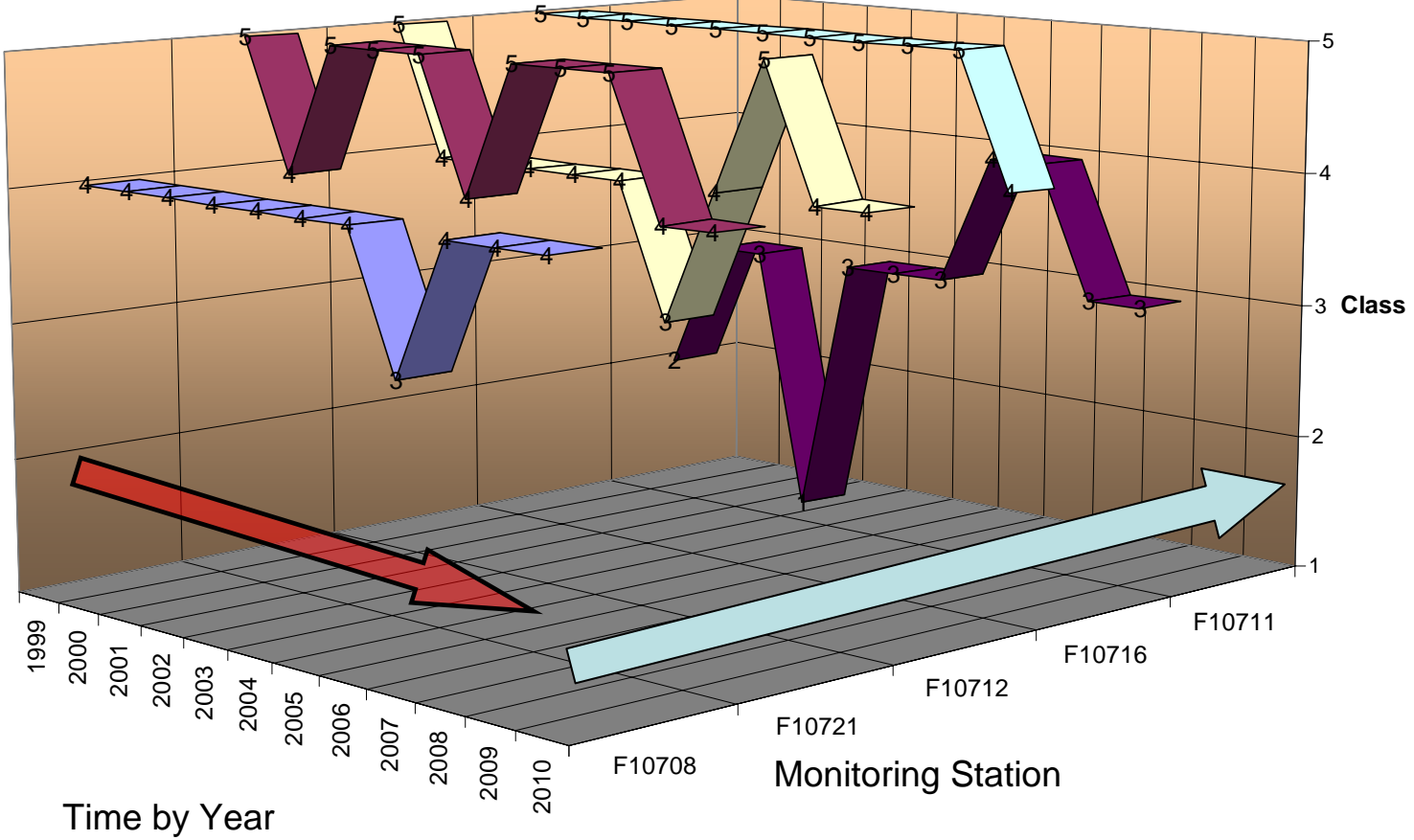
# Colebrooke River



# Colebrooke River

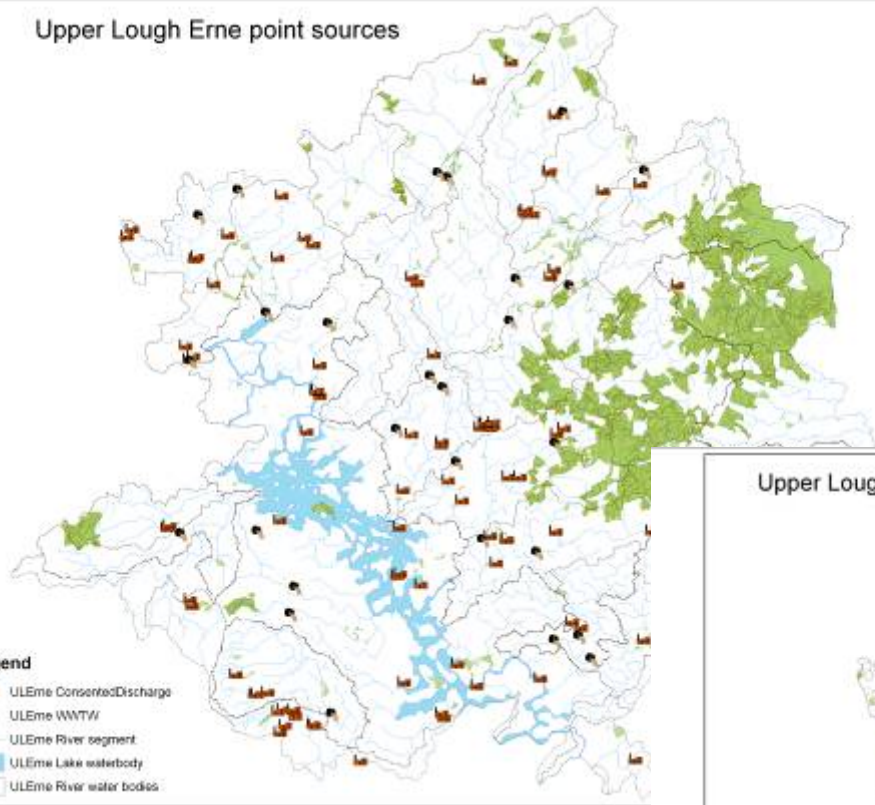


# Colebrooke River



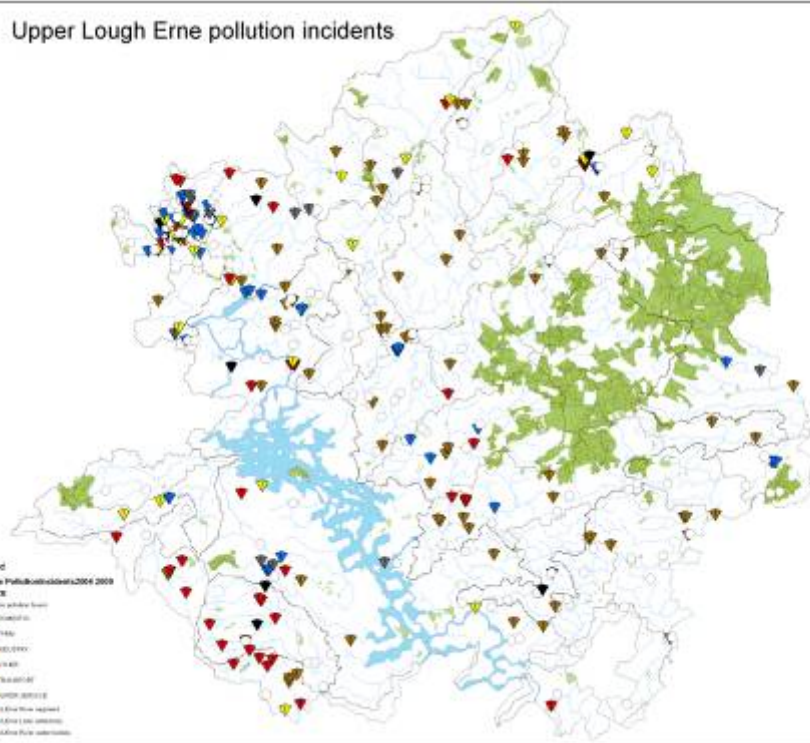
- F10708
- F10721
- F10712
- F10716
- F10711

### Upper Lough Erne point sources

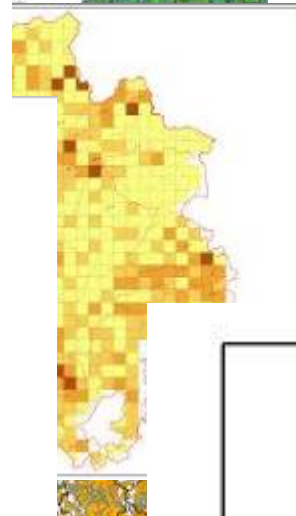
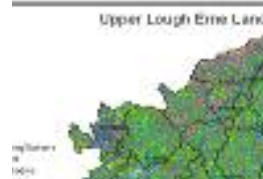
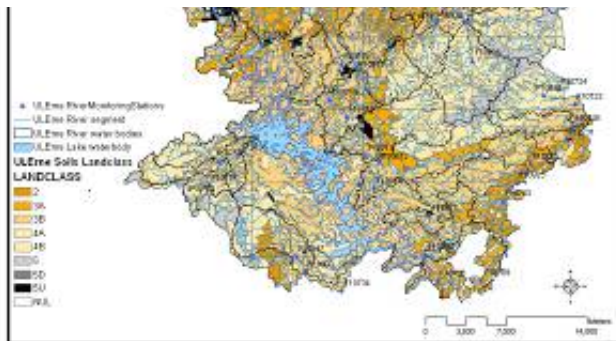
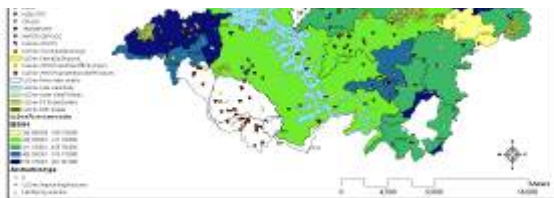
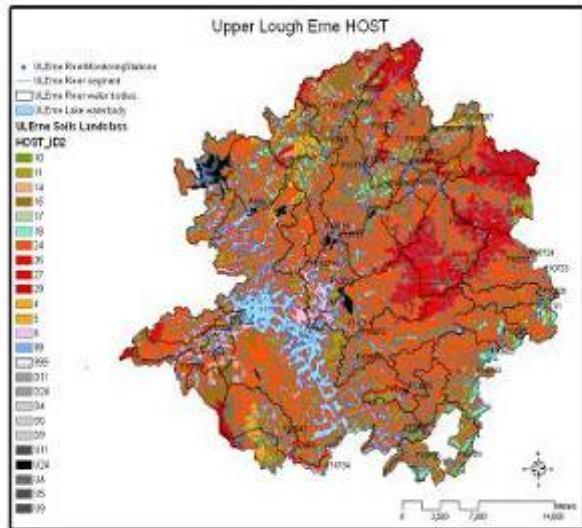


- Legend**
- ULEme Consented Discharge
  - ULEme WWTW
  - ULEme River segment
  - ULEme Lake waterbody
  - ULEme River water bodies

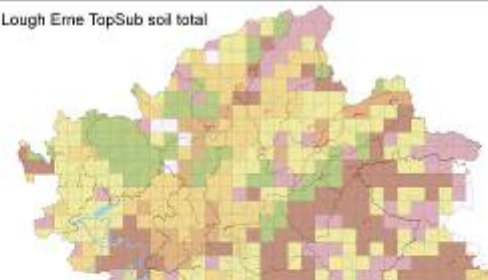
### Upper Lough Erne pollution incidents



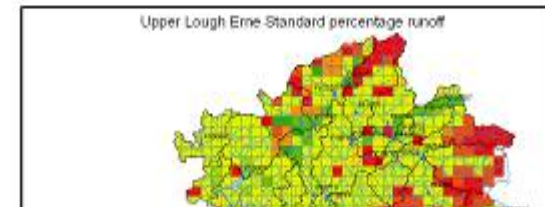
- Legend**  
 ULEme Pollution Incidents 2004-2009
- SOURCE**
- The Pollution Agency
  - DRAINAGE
  - FARM
  - INDUSTRY
  - LULU
  - TRANSPORT
  - UNKNOWN SOURCE
- Other symbols:**
- ULEme flow regulated
  - ULEme Lake waterbody
  - ULEme River water bodies



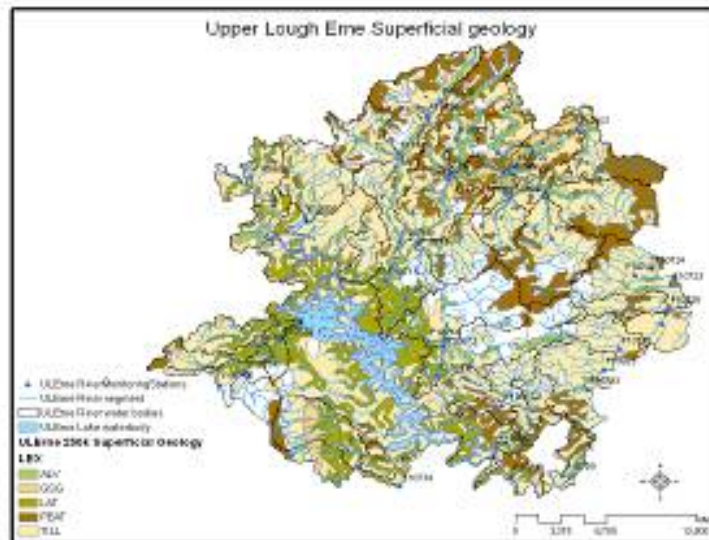
Upper Lough Erne TopSub soil total



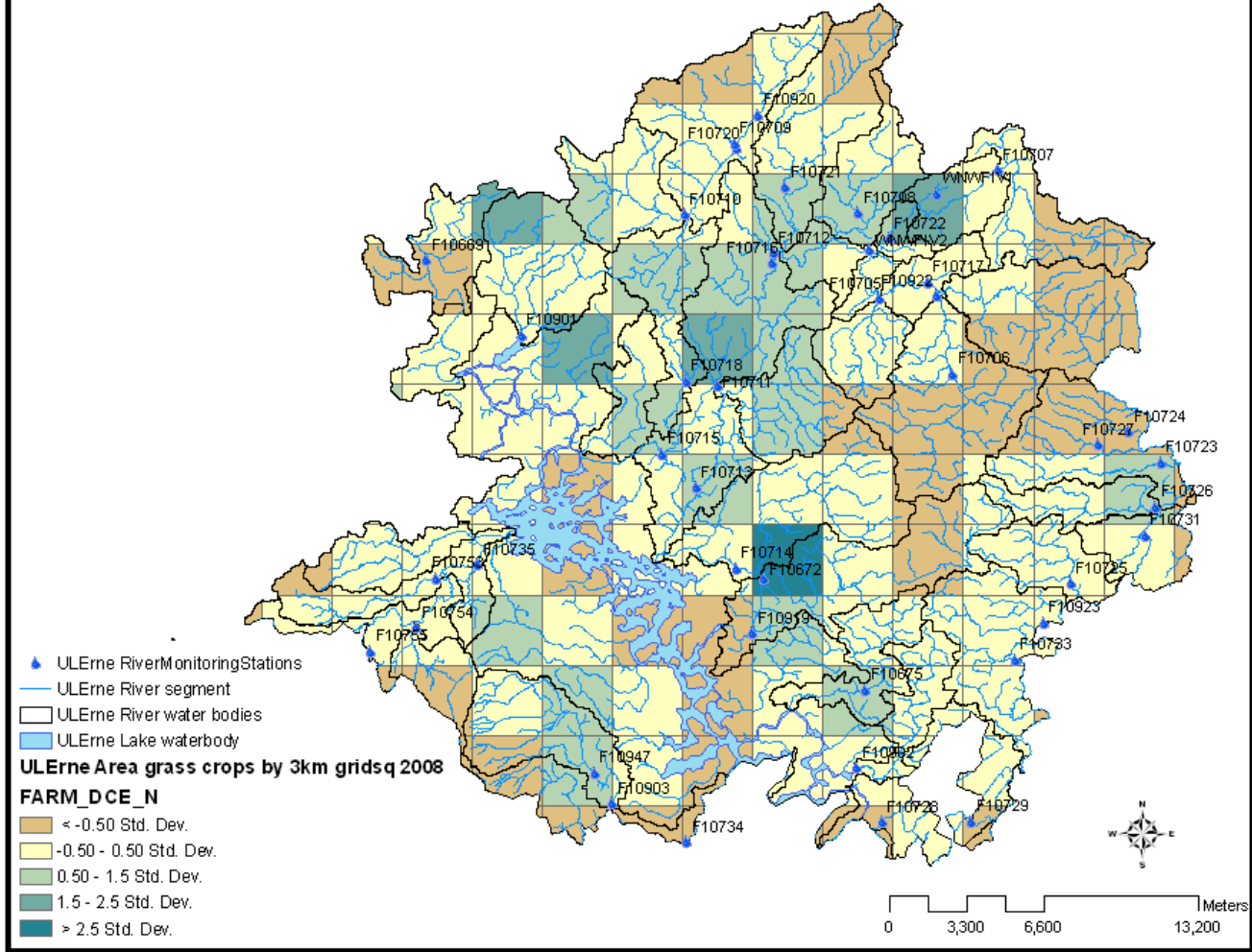
Upper Lough Erne Standard percentage runoff

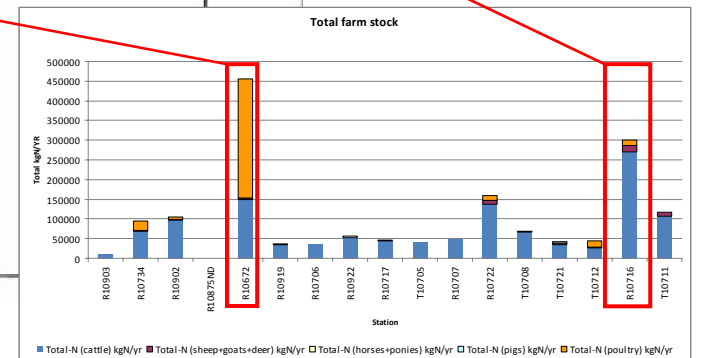
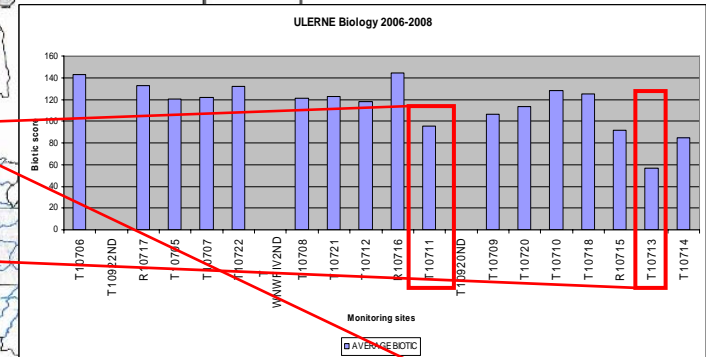
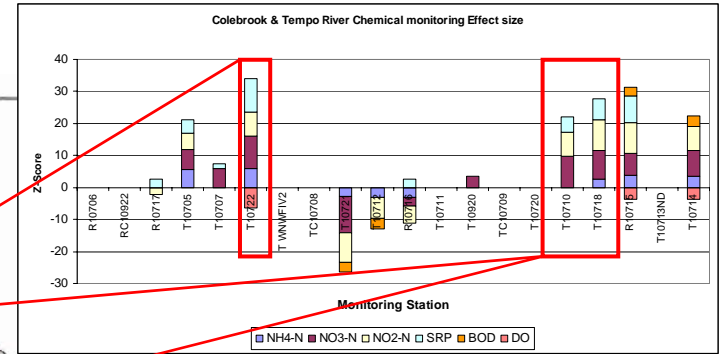
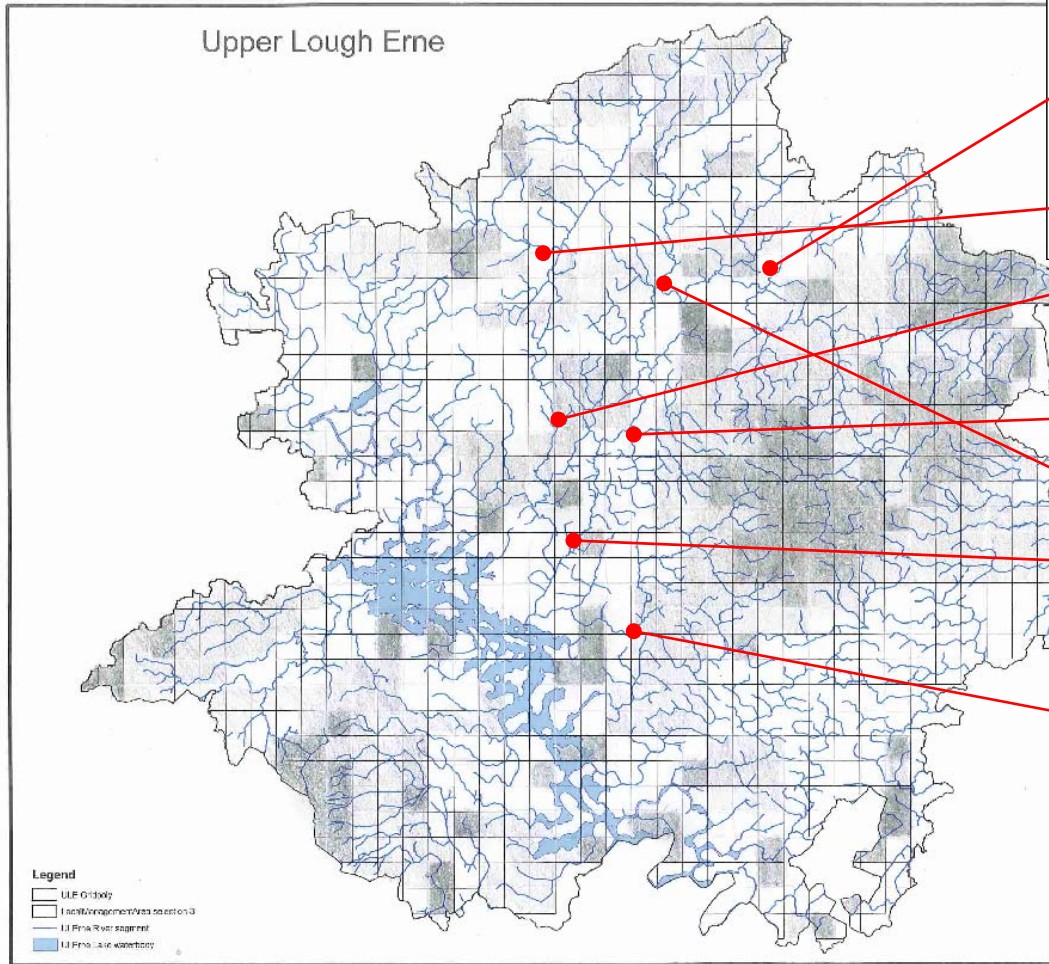


Upper Lough Erne Superficial geology



# Upper Lough Erne Farm Dairy cow equivalent N







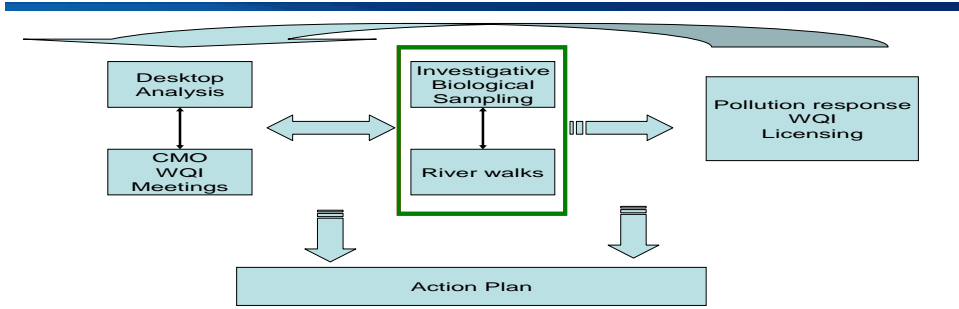
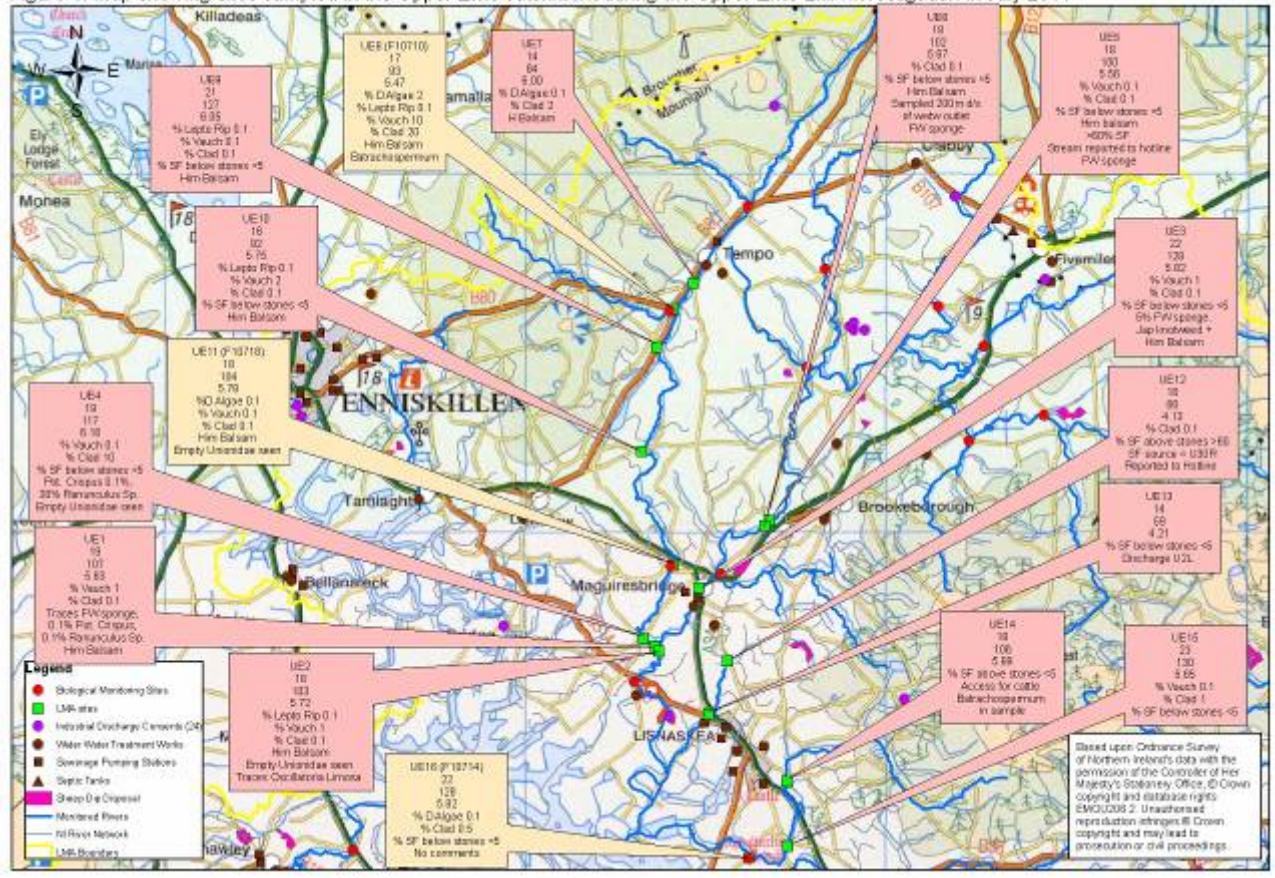


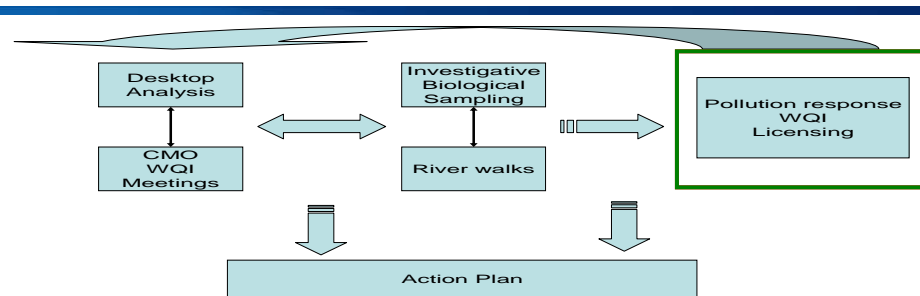
Figure 1: Map showing sites sampled in the Upper Erne catchment during the Upper Erne LMA investigation in July 2011



## River walks

- Evidence of pollution e.g. discharges, sewage fungus
- Surrounding land use and buffer strips
- Morphology impacts
- Invasive alien species





Code	River	Findings
UE1	COLEBROOKE	Traces of freshwater sponge. Himalayan Balsam on banks CAD
UE2	COLEBROOKE	Himalayan Balsam on banks. Traces of Oscillatoria Limosa in sample
UE3	COLEBROOKE	5% Freshwater sponge. Japanese knotweed + Himalayan Balsam on banks.
UE4	TEMPO	Pot. Crispus 0.1%, 30% Ranunculus Sp.
UE5	COLEBROOKE	Himalayan balsam on banks. >60% Sewage fungus + strong silage smell in stream. Stream reported to Emergency Pollution Hotline CAD. Freshwater sponge in sample AJD <b>Pollution confirmed. Under investigation by WQI</b>
UE6	COLEBROOKE	Himalayan Balsam on banks. Freshwater sponge in sample.
UE7	TEMPO	Himalayan Balsam on Banks.
UE8	PUBBLE BURN	Himalayan Balsam on Banks.
UE9	TEMPO	Himalayan Balsam on Banks.
UE10	TEMPO	Himalayan Balsam on banks.
UE11	TEMPO	Himalayan Balsam on banks.
UE12	(COLEBROOKE FEEDER) DRUMLIGHT	Stream U30R (IGR IH35738 36560) is source of sewage fungus entering main river. Thick long strands of S.F. Covering river bed. Reported to Pollution Hotline. <b>Pollution confirmed. Under investigation by WQI</b>
UE13	(COLEBROOKE FEEDER) DRUMLIGHT	Discharge U2L - CMC
UE14	HOLLYBROOK	Cattle access to river, poaching downstream on Left.

# Thank you

Our aim is to protect, conserve and promote our natural and built environment for the benefit of present and future generations.

