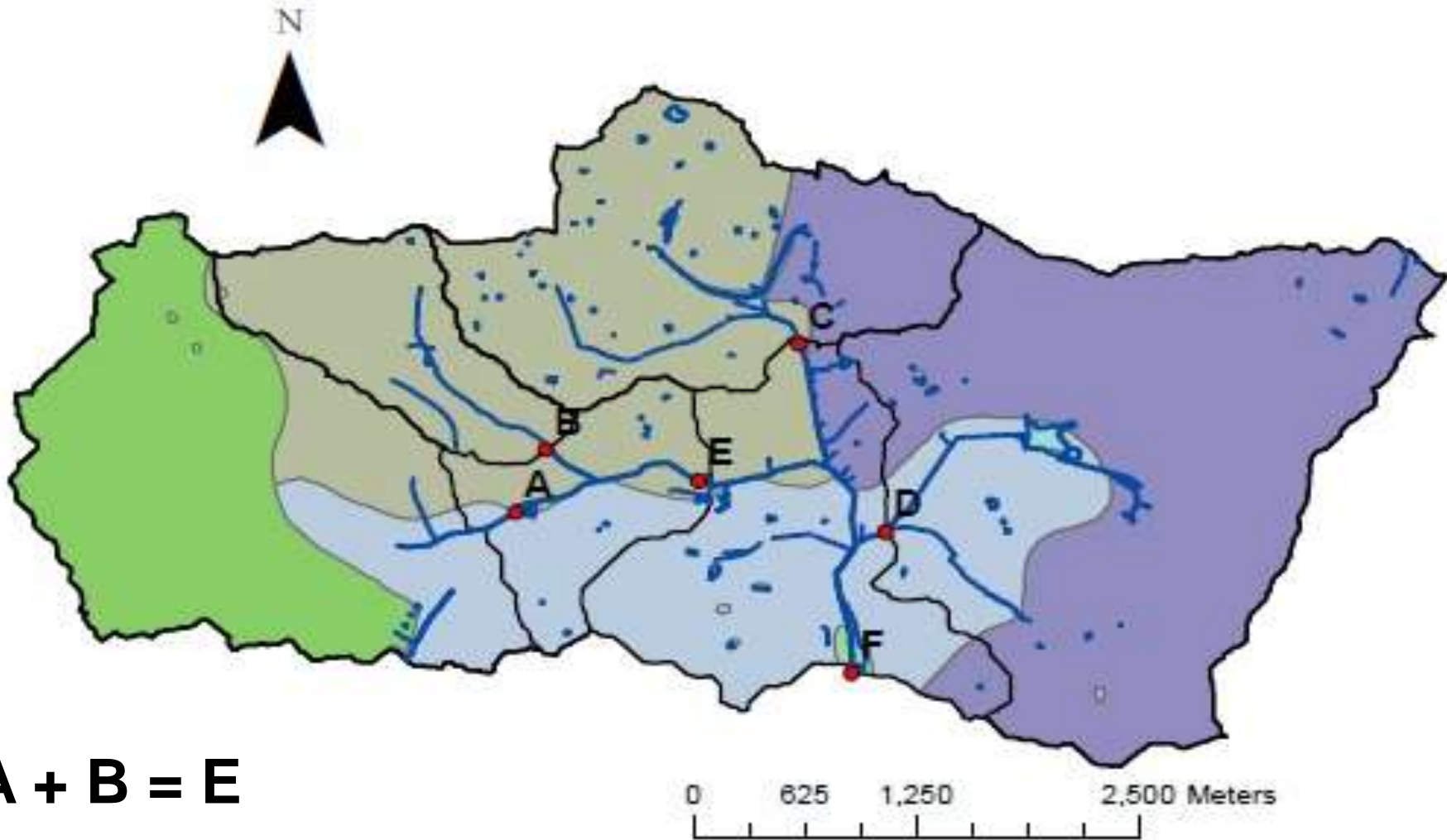


What does high resolution
water quality data tell us
about pollutant sources
and pathways in the
Wensum DTC?

Elizabeth Edney

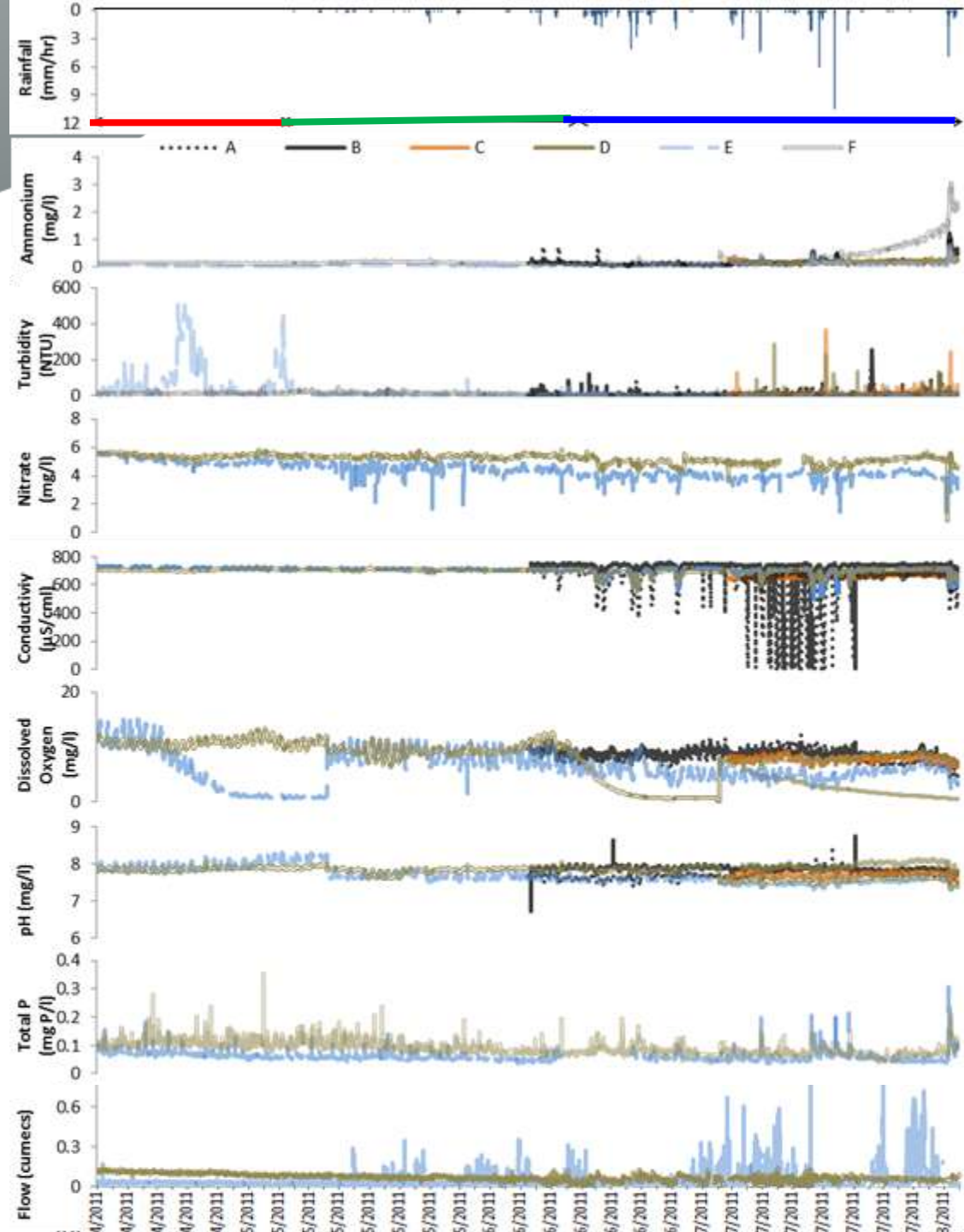
Monitoring sites



$$A + B = E$$

$$E + C + D = F$$

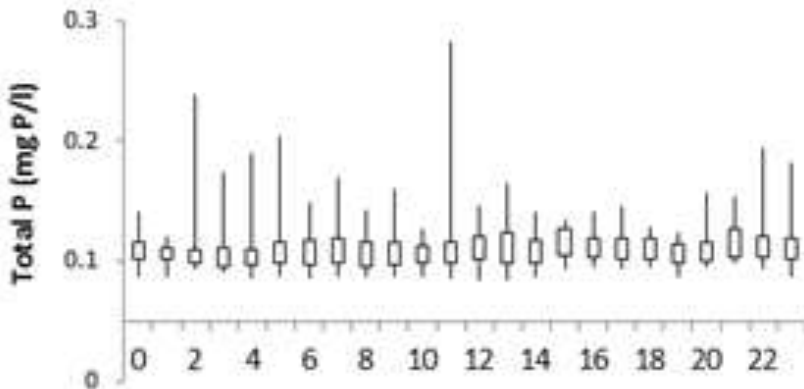
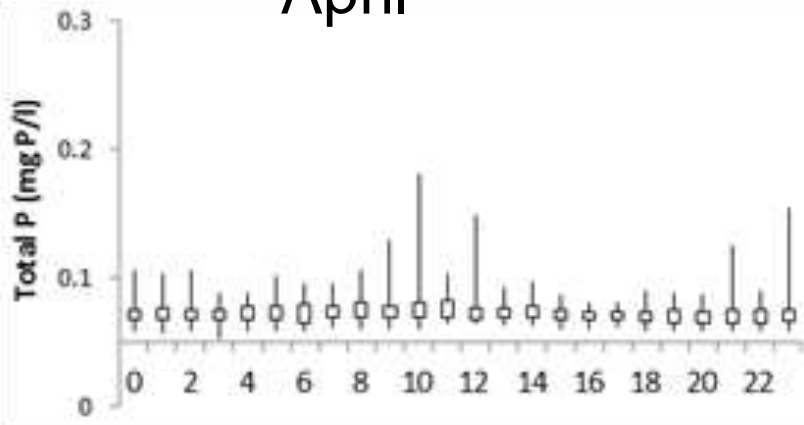
The data



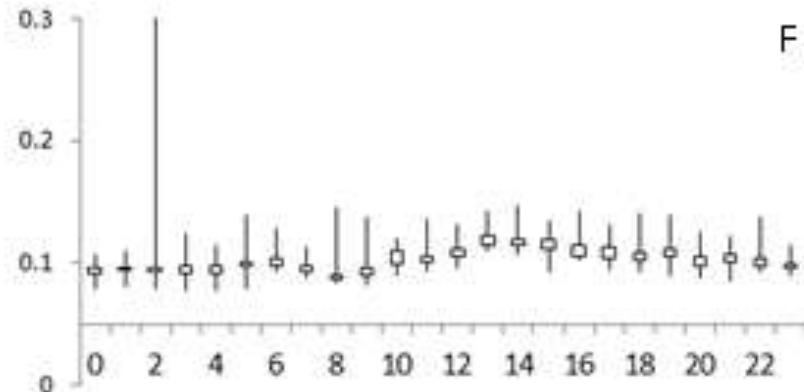
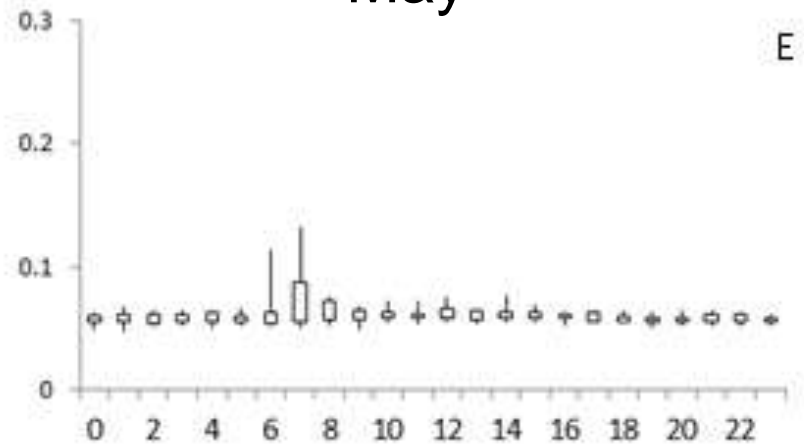
1. Dry

Possible evidence of diurnal pattern – septic tanks?

April

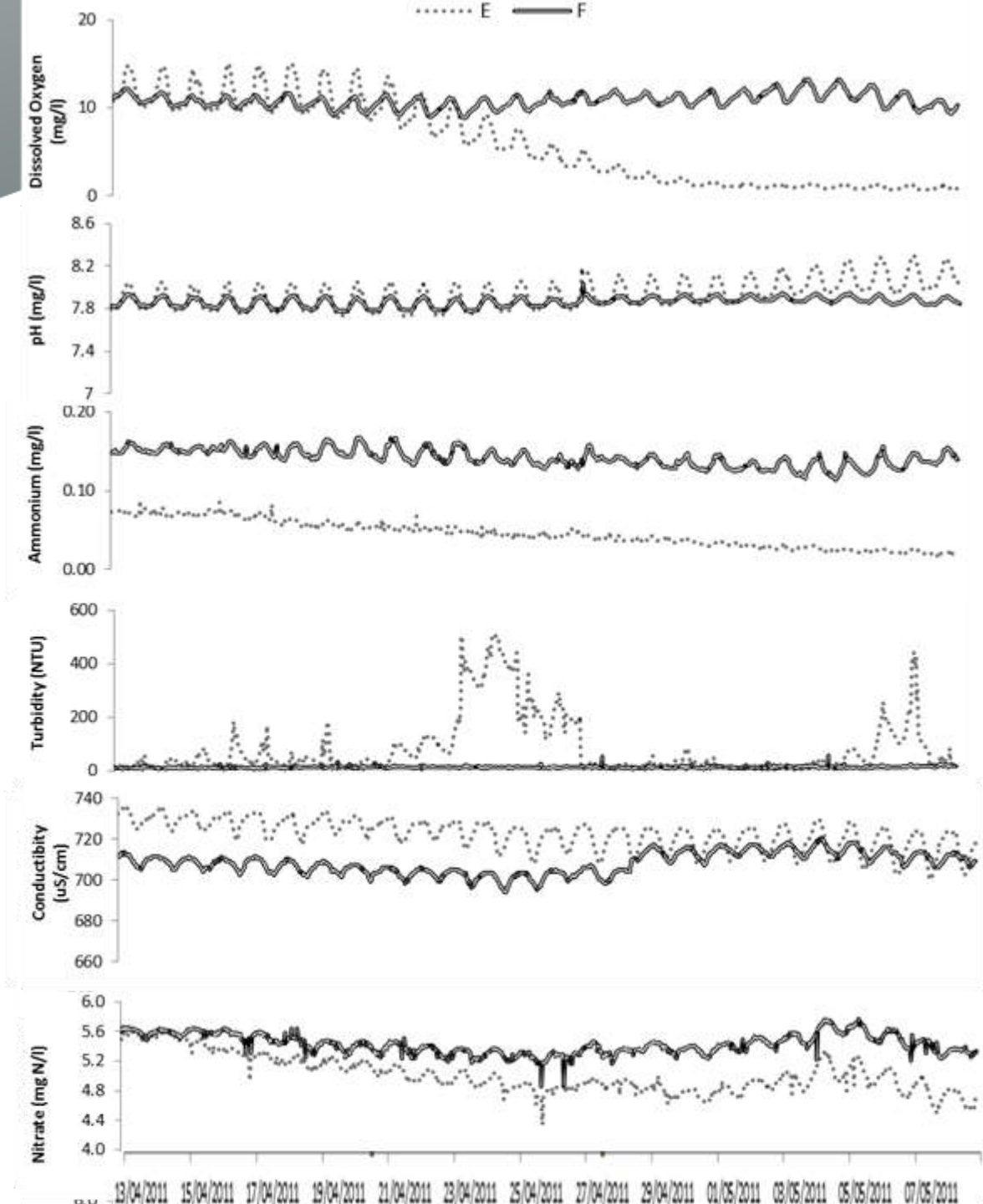


May



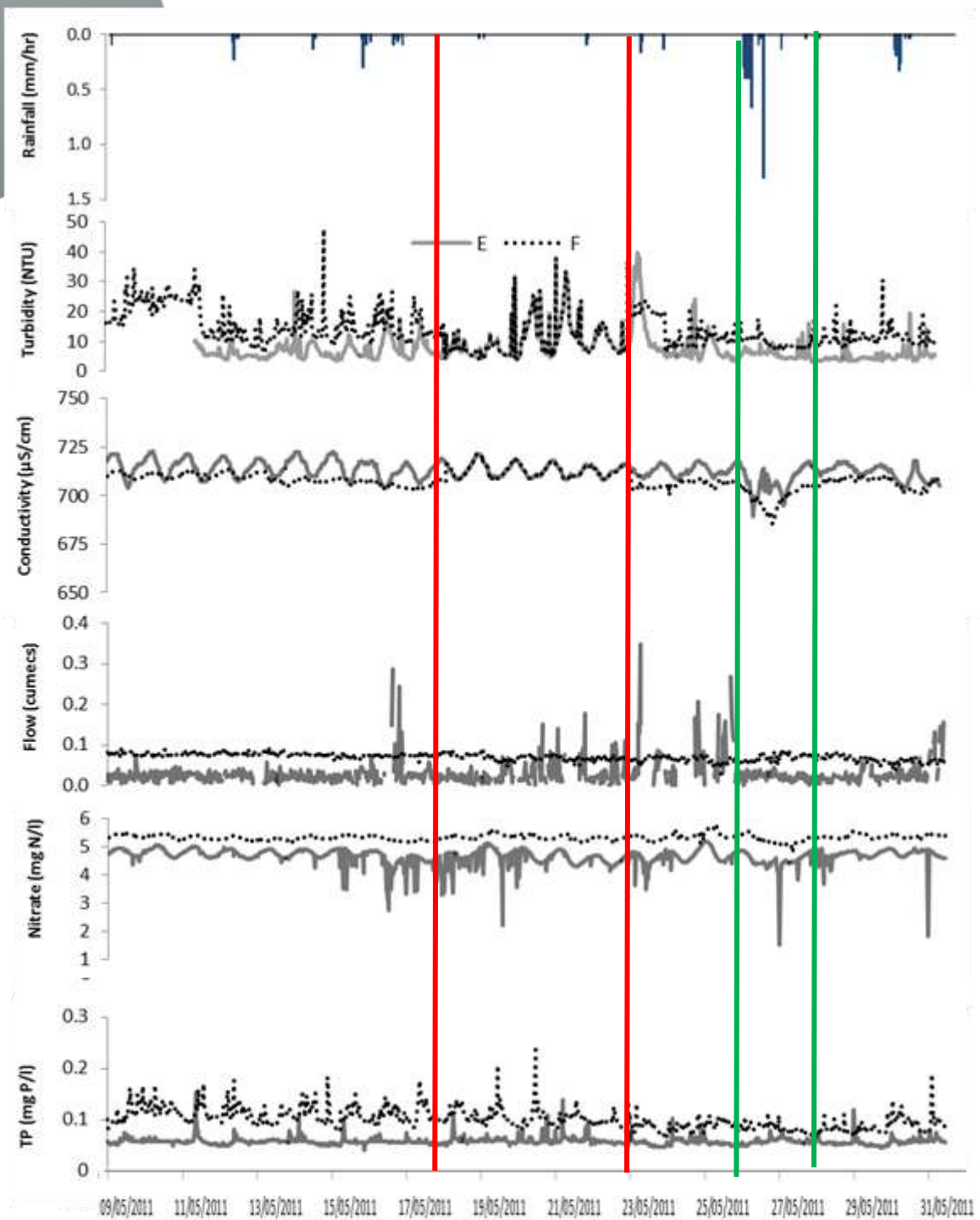
1. Dry

- Strong diurnal signal – in-stream processes
- Nitrate $F > E$ – groundwater within permeable eastern subcatchments

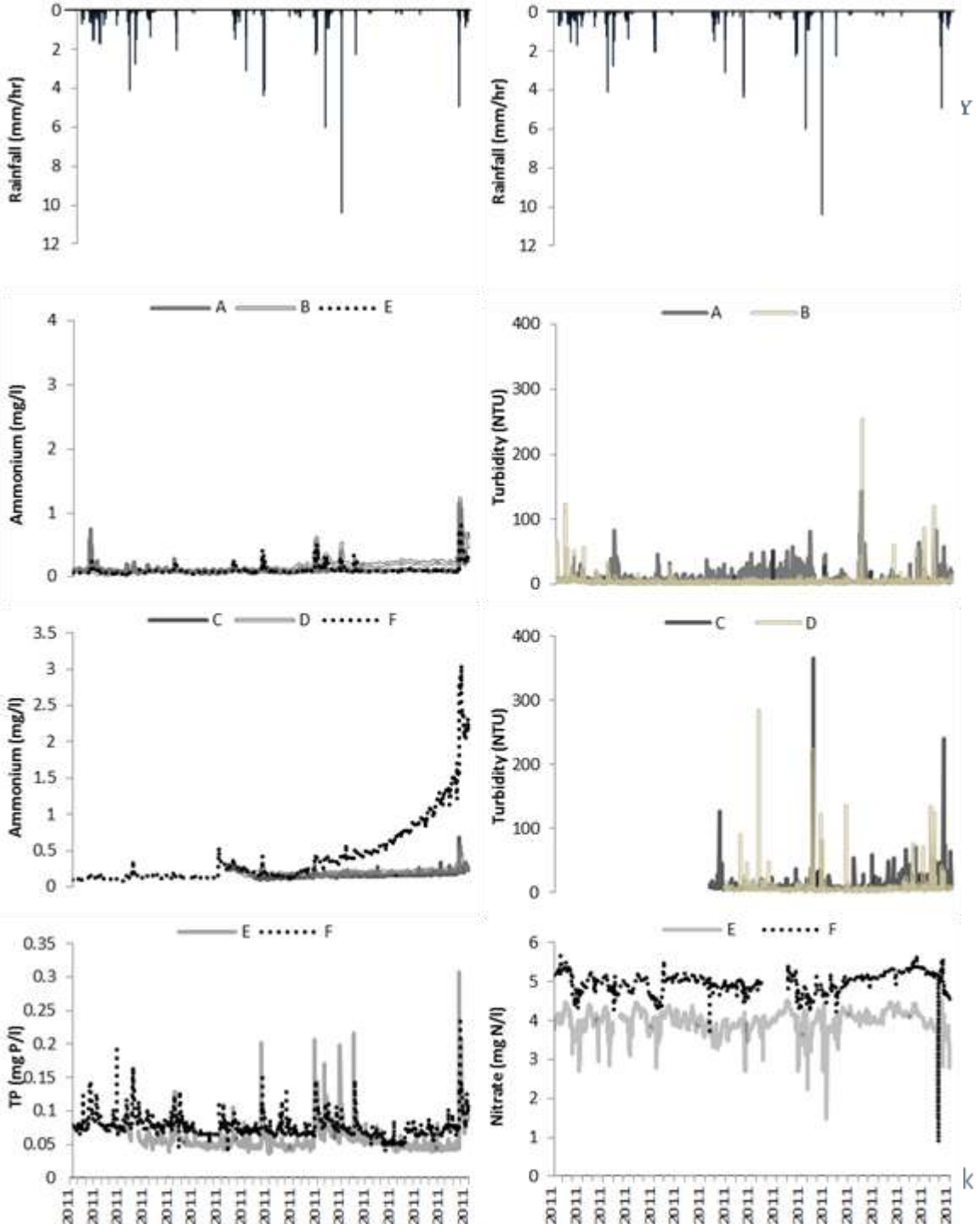


2. Damp?

- $F = E$ – irrigation or impoundment effects in D?
- Change in water sources (EC), reduction in nitrate but TP constant



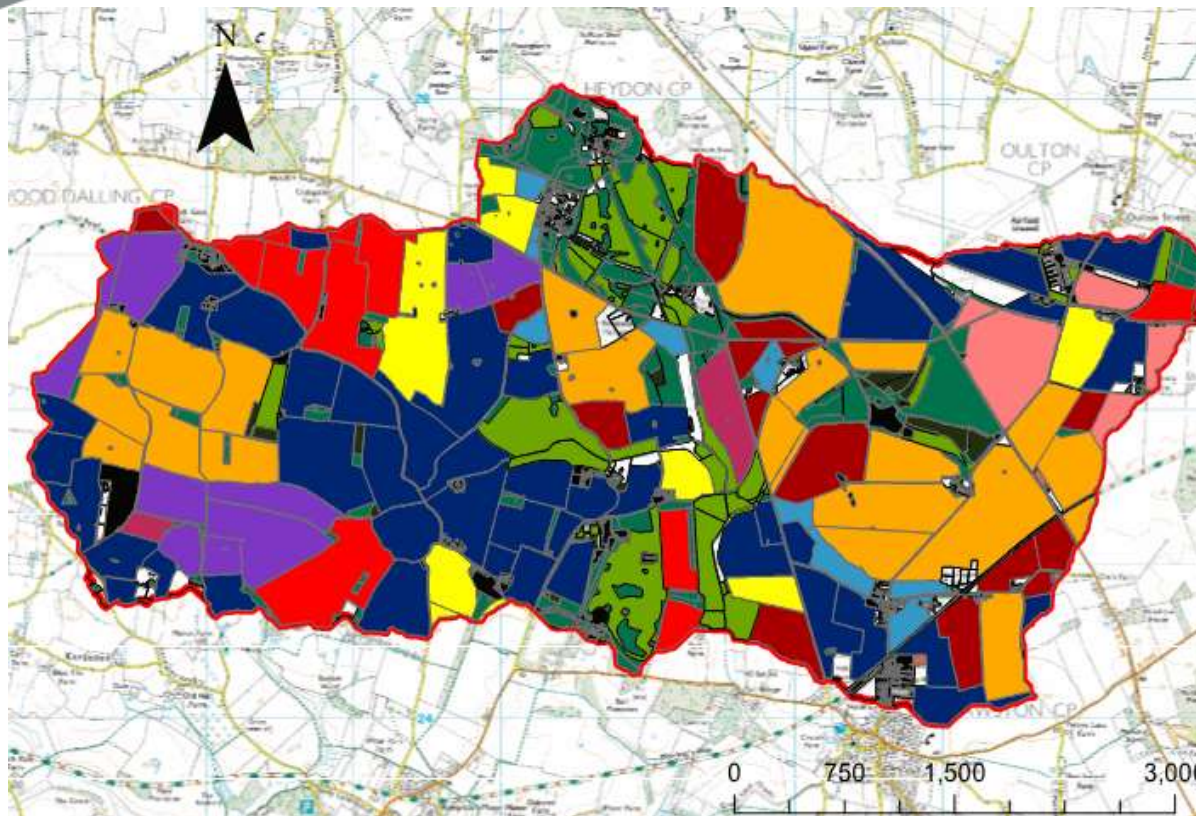
3. Wet



- Changes in nitrate, turbidity and TP:
 - \uparrow Turbidity & TP
 - \downarrow nitrate
- Large turbidity at C
- TP spikes $E > F$
- Turbidity $A > B$

- Water quality is very dynamic, given time of year
- Spatial differences in responses
- Evidence of agricultural and non-agricultural signals
- Very challenging to make sense of the data!
- Partly due to instrumental challenges- time.....

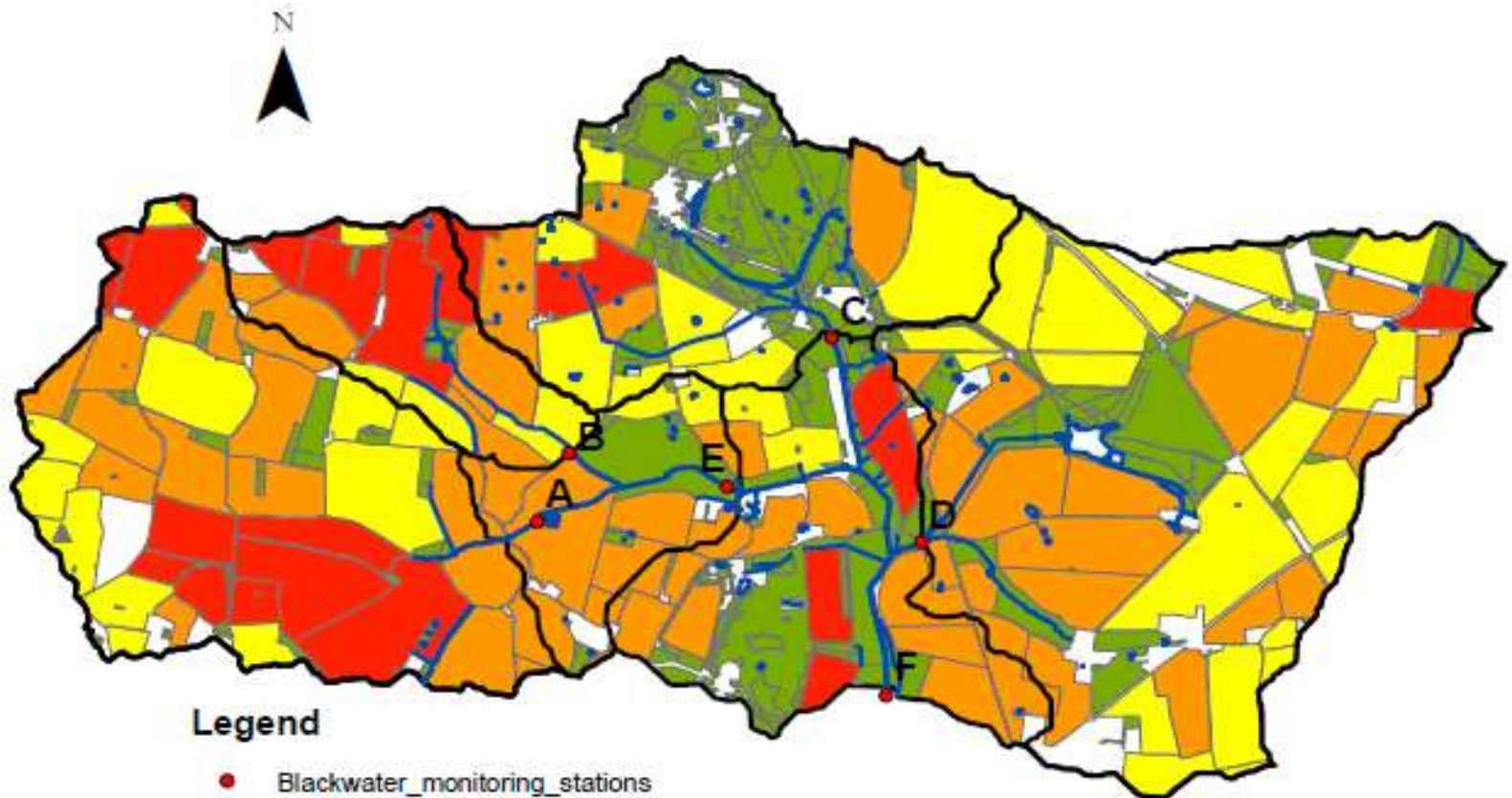
Blackwater subcatchment



Legend



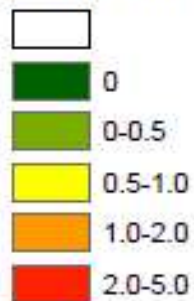
Blackwater subcatchment



Legend

● Blackwater_monitoring_stations

Field risk t/ha/a



0 750 1,500 3,000 Meters

Soil erosion risk map based on
actual 2010 land use