

Something in the water?

- Results of water monitoring at selected project sites

Dr. Philip O'Dea
Research & Environment
Coillte

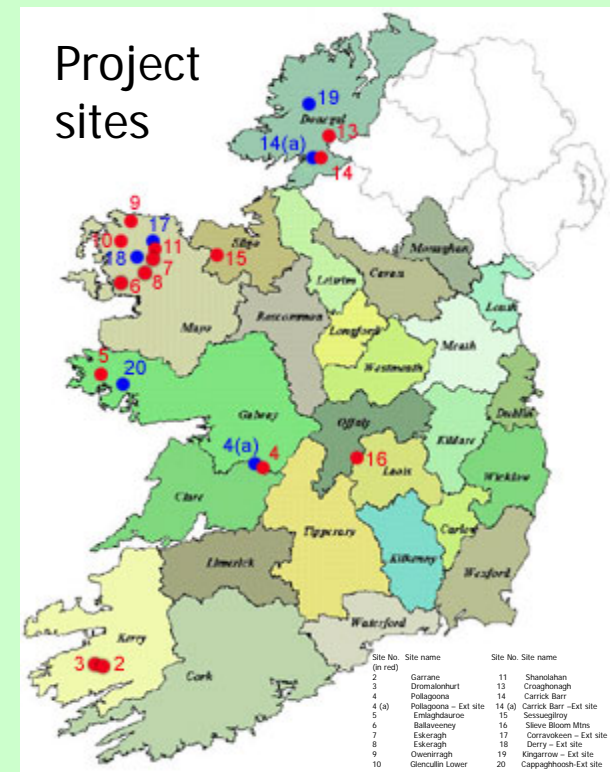


'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Purpose of Water Monitoring

- Eutrophication identified as the greatest single treat to the quality to the country's rivers and lakes.
- Contribution of forestry to eutrophication in Ireland largely unquantified.
- Need to monitor impacts of bog restoration measures which will entail:
 - Larger than normal feeling coups
 - Non conventional harvesting techniques
 - Blocking of forest drains



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



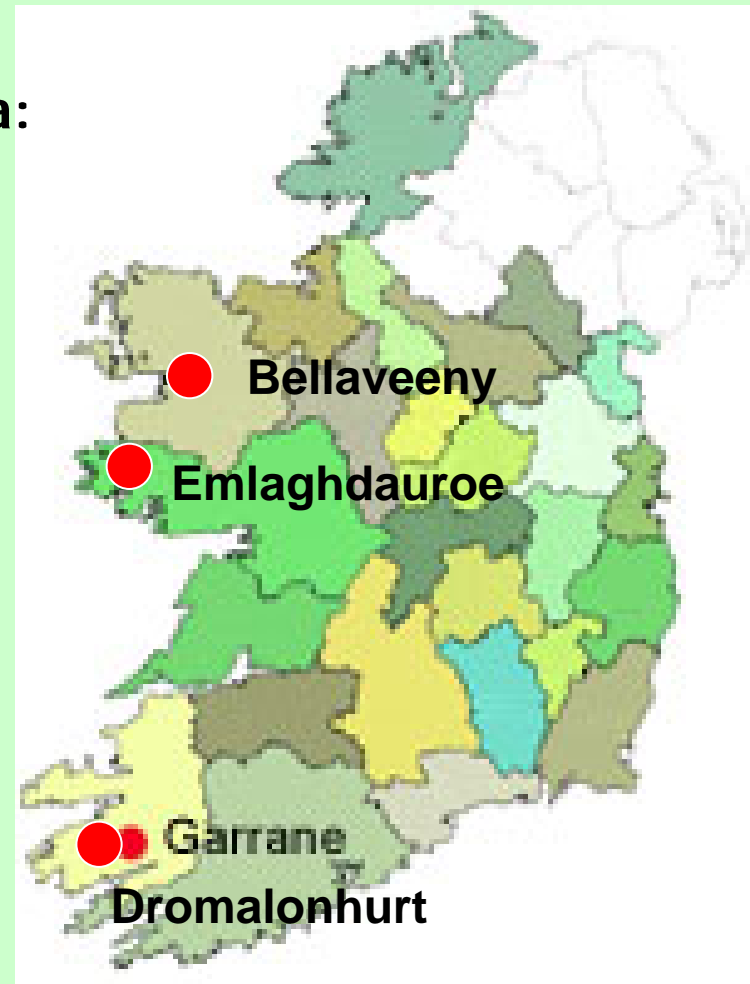
Selection of Monitoring Sites

Selection based on following criteria:

- Presence of significant watercourse
- Environmentally sensitive areas
 - Freshwater pearl mussel and acid sensitive catchment e.g. Dromalohurt & Garrane
 - acid sensitive catchment e.g. Emlaghdauroe and Bellaveeny

Method of monitoring:

- Automatic sampler
- Supplementary grab sampling



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

coillte

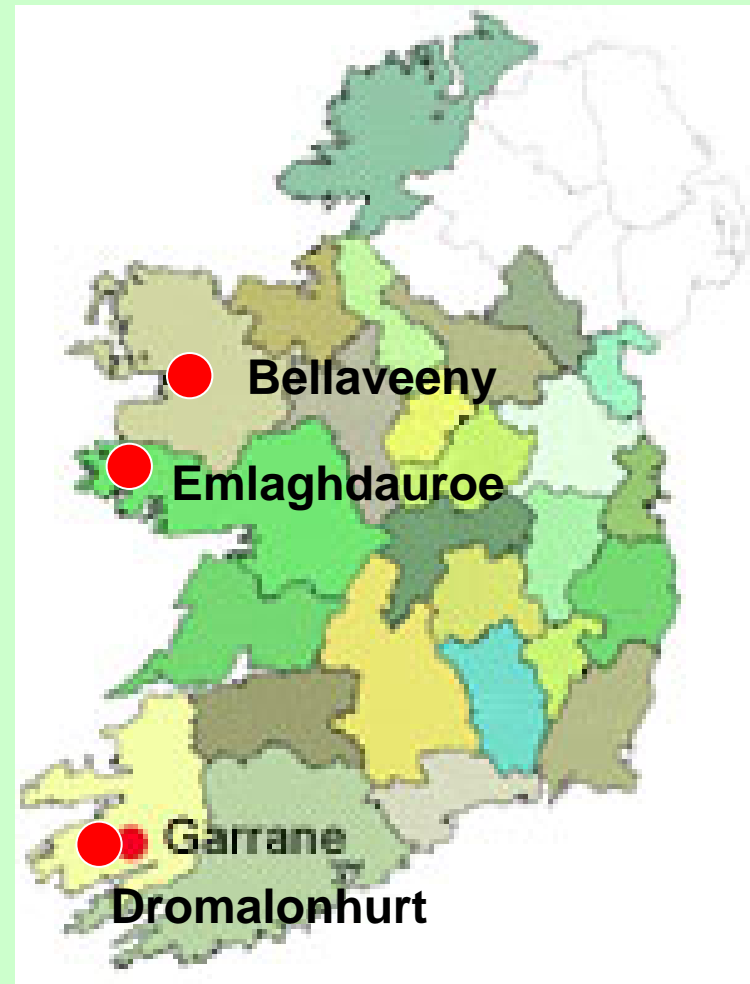
Selection of Monitoring Sites

Sampling frequency:

- Automatic sampler (24/7)
 - Daily composite sample (comprising of taking a sample every hour during a 24 hr period)
- Grab sampling
 - Approximately every month

Parameters analysed:

- Colour, pH, Total Suspended Solids, Conductivity, Alkalinity, Calcium, Magnesium, Hardness, Potassium, Ammonia, Nitrate, Chloride, Sulphate, Ortho-phosphate and Total Phosphorus

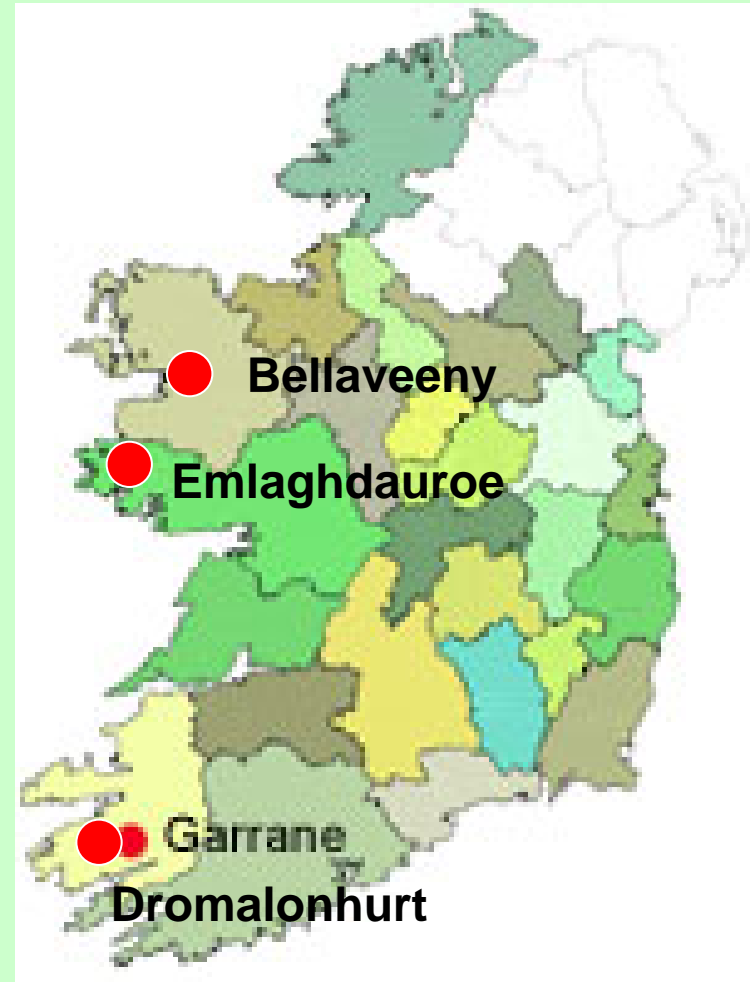


'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

coillte

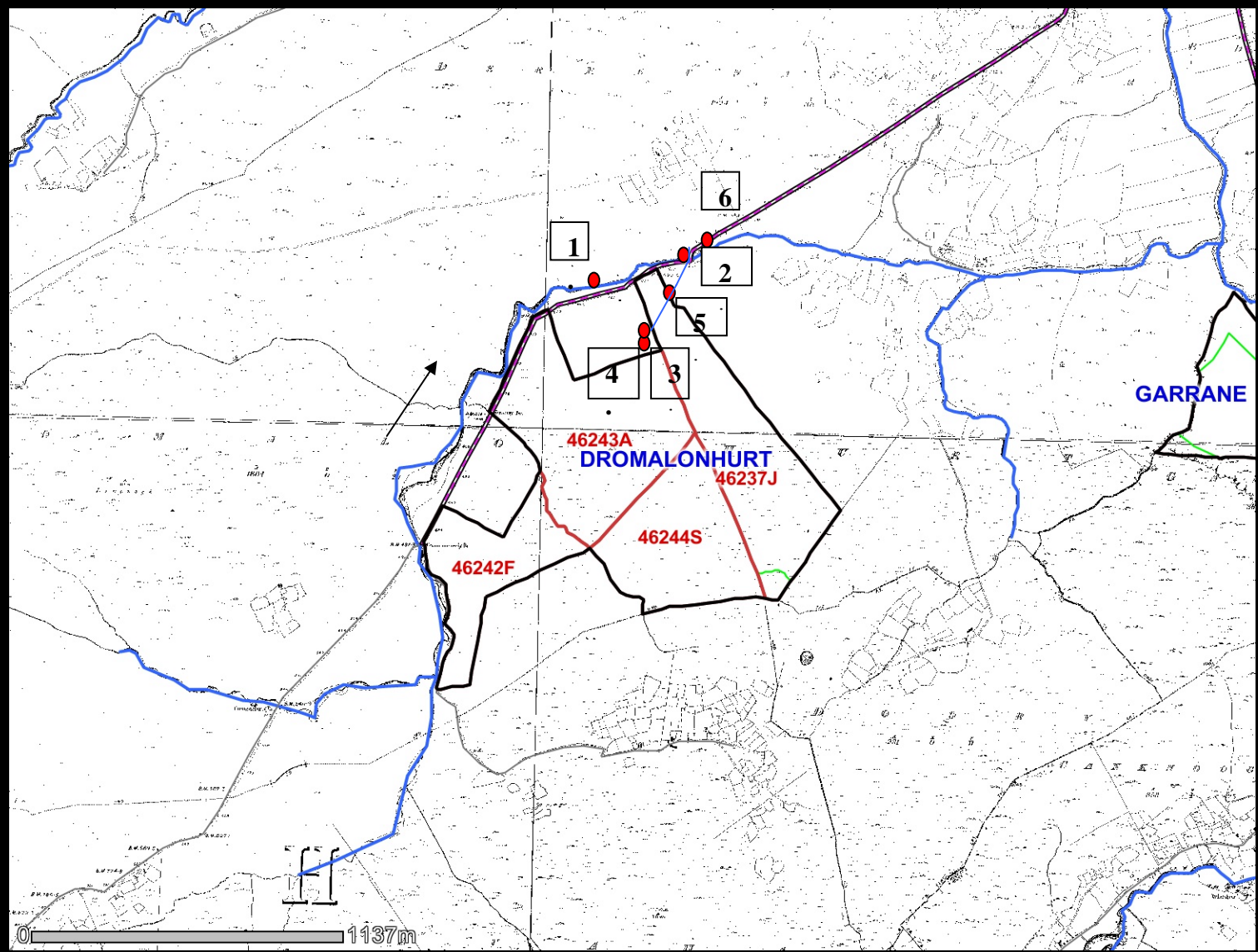
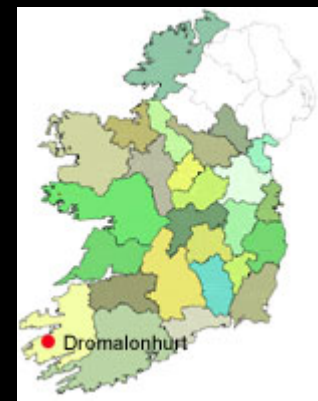
Catchment details

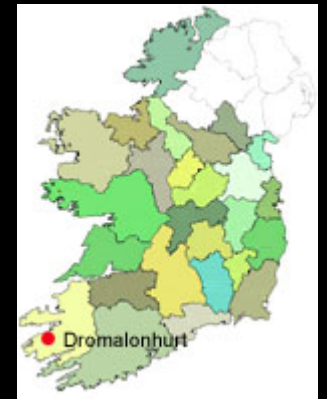
Location	Catchment to A/S (ha)	Felled (ha)	% of catchment felled
Emlaghdauroe (Co. Galway)	170	70	41
Bellaveeny (Co. Mayo)	152	85	56
Dromalohurt (Co. Kerry)	30	20	66

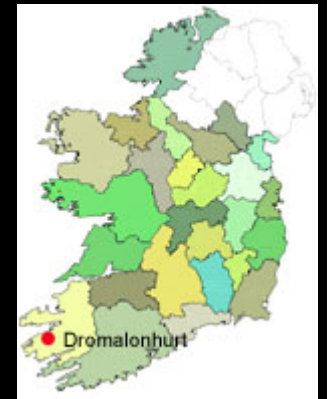


'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

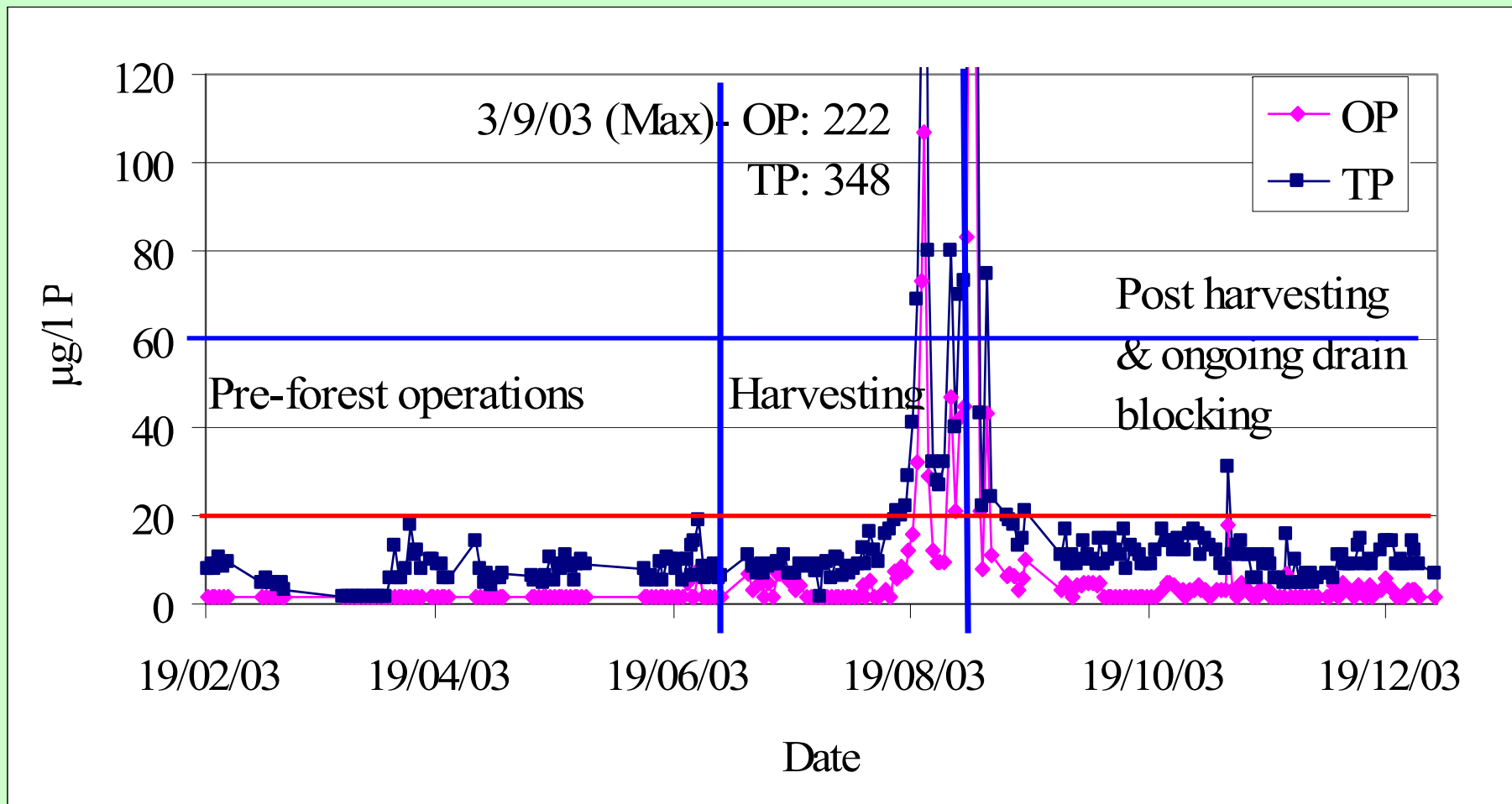
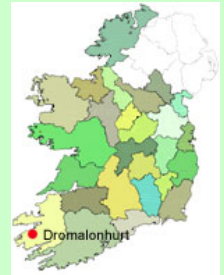






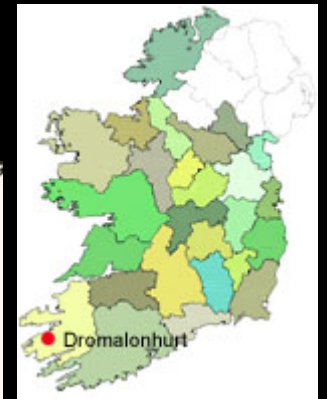


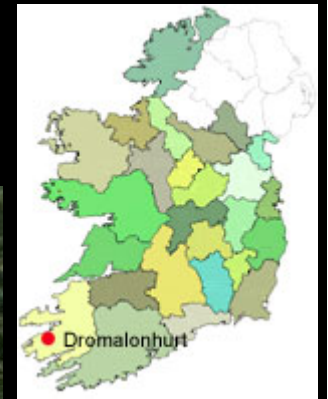
Results



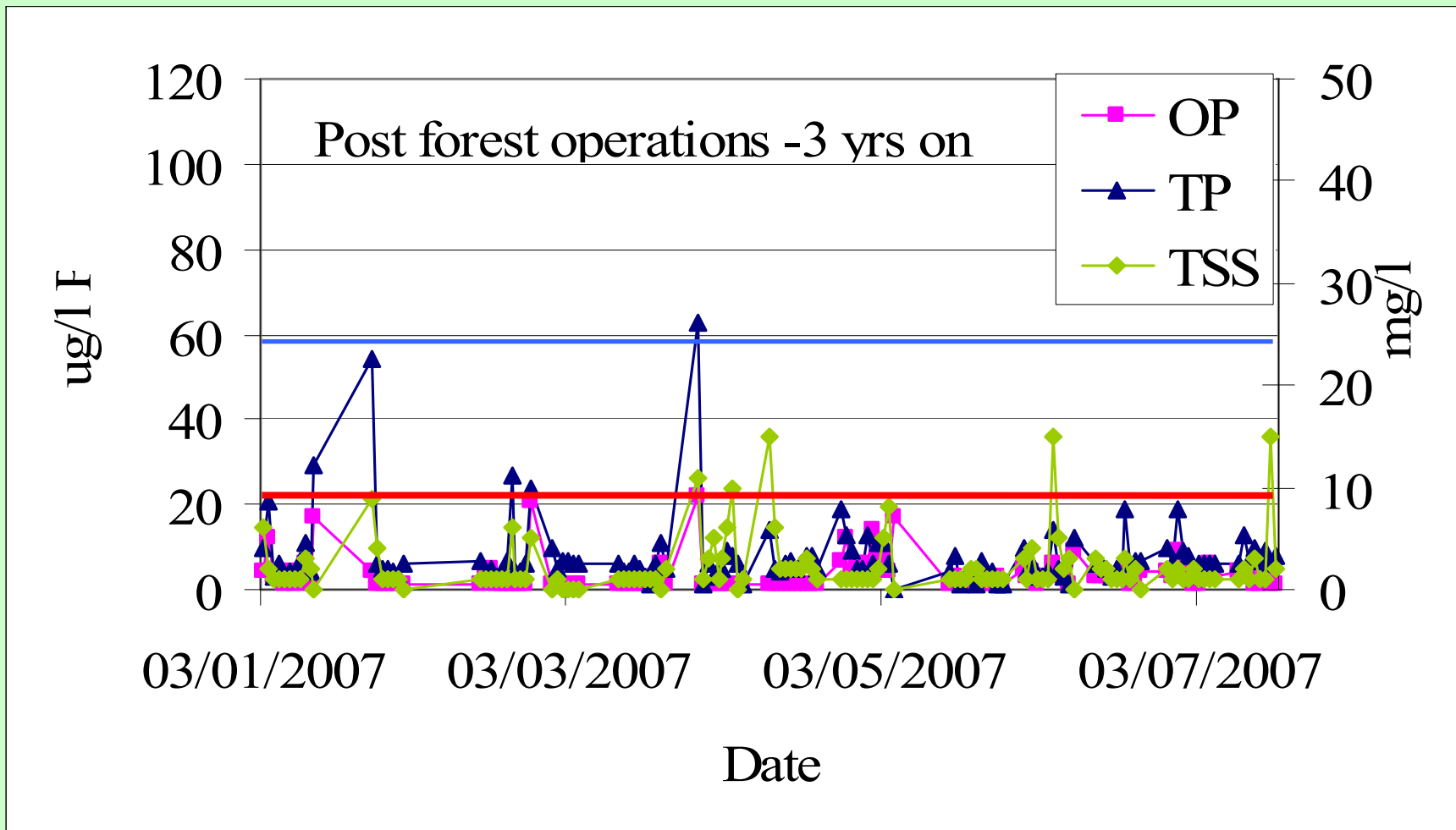
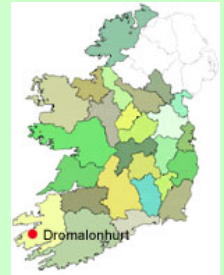
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

coillte





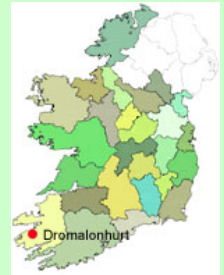
Results



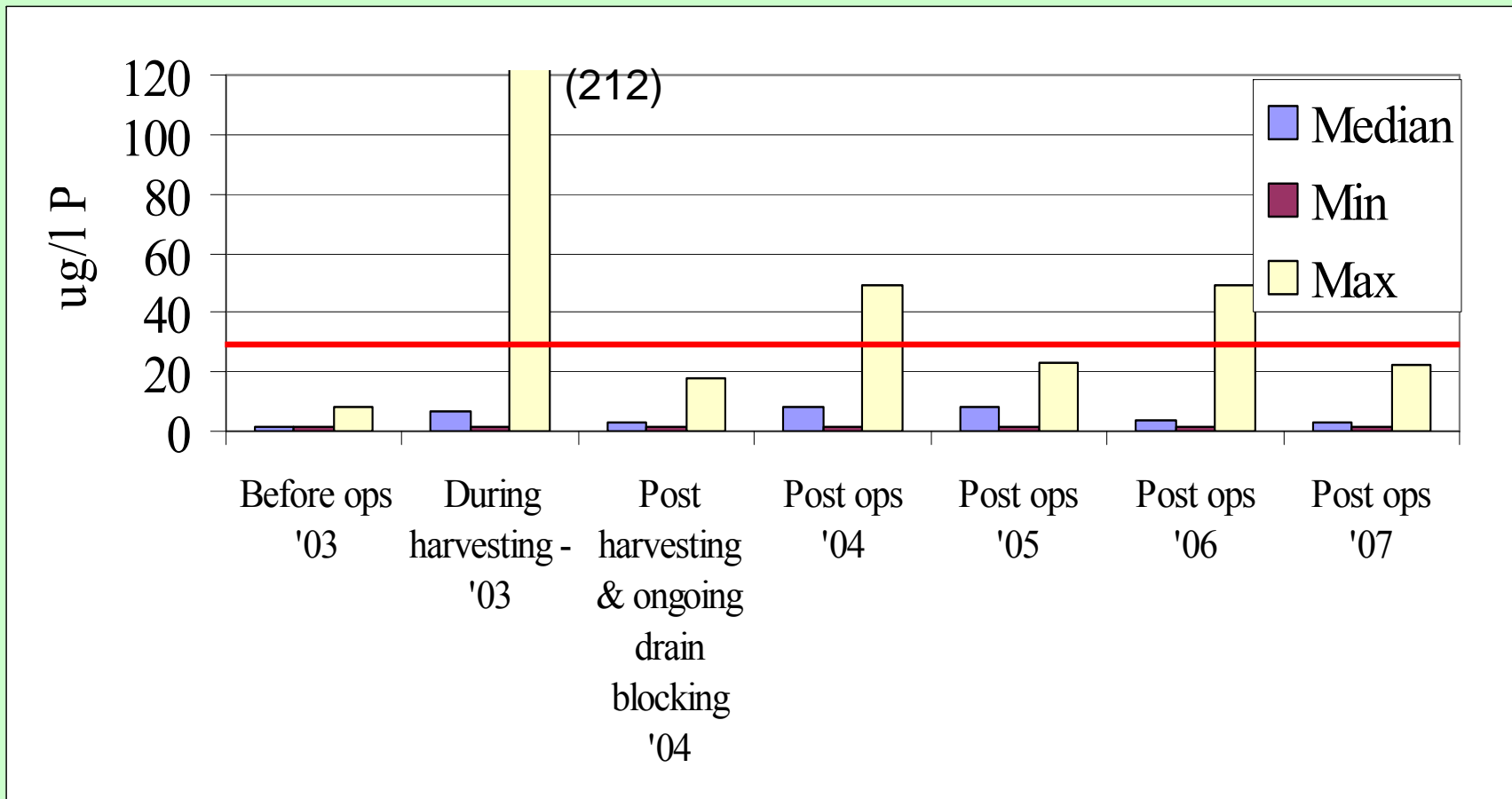
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Results



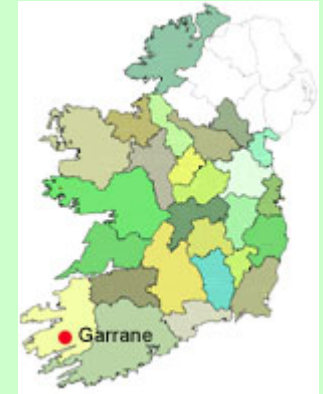
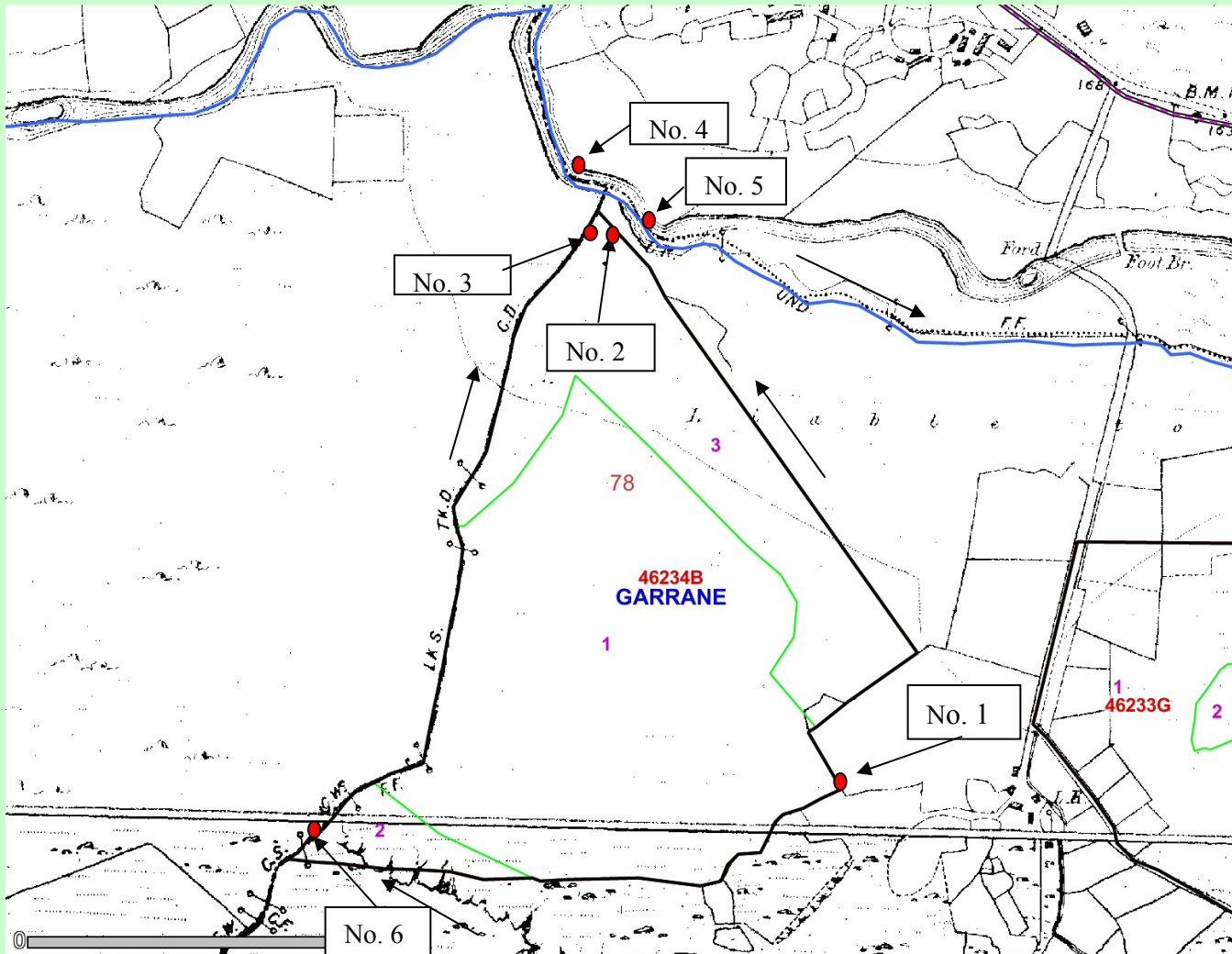
Ortho-P concentrations at various stages of bog restoration at Dromalohurt



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

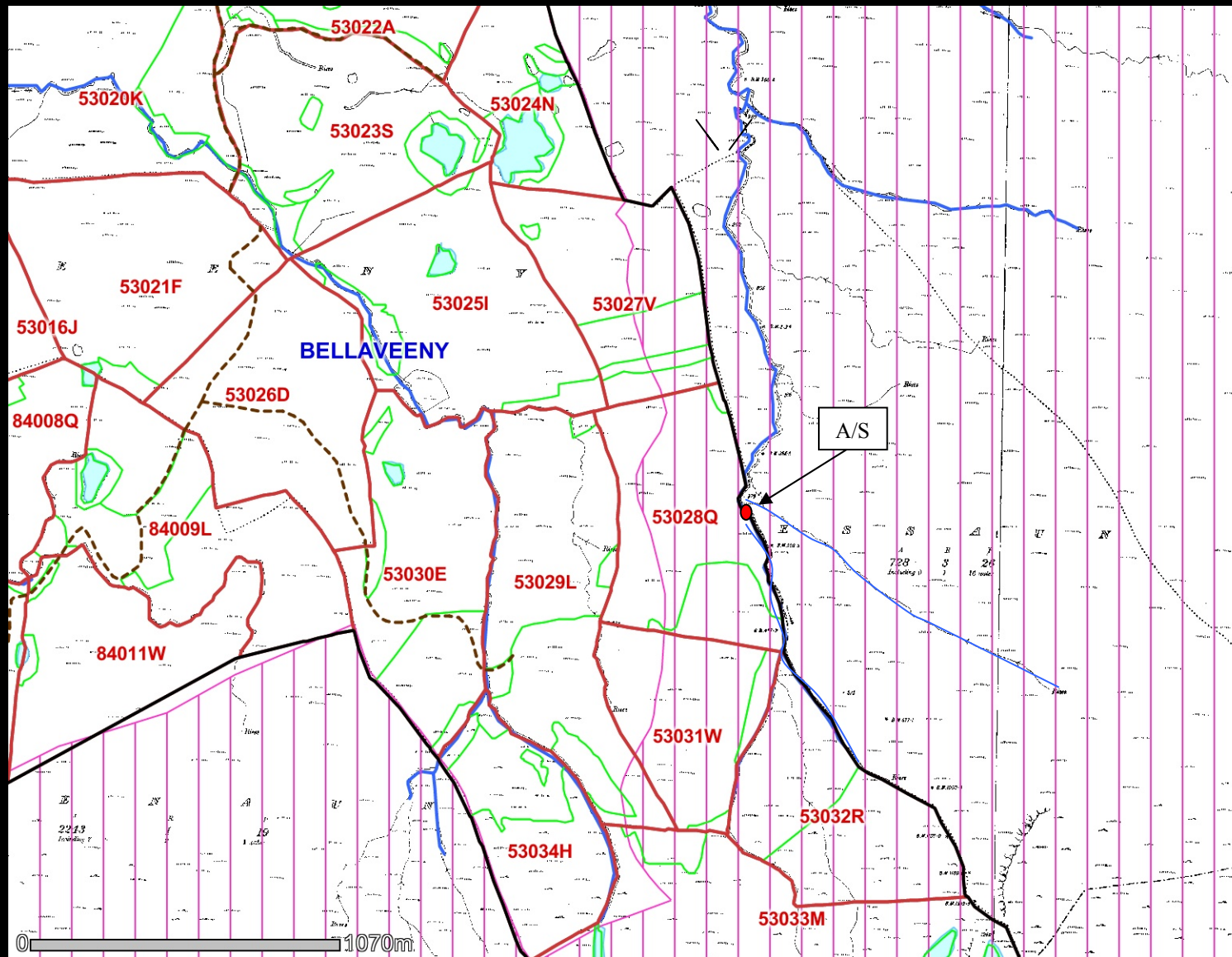


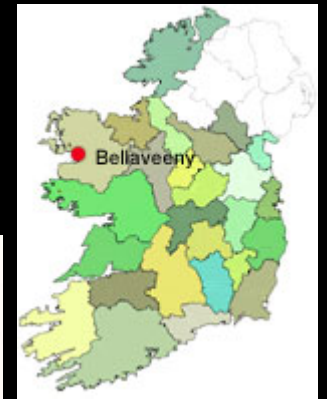
Selection of Monitoring Sites



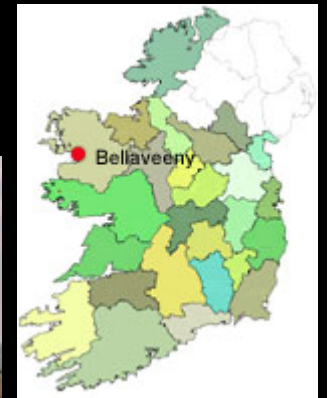
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07

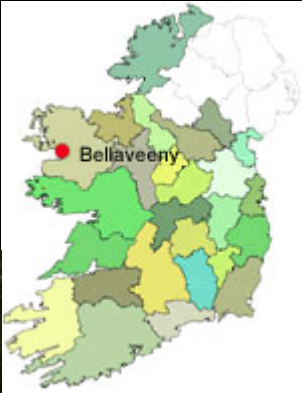


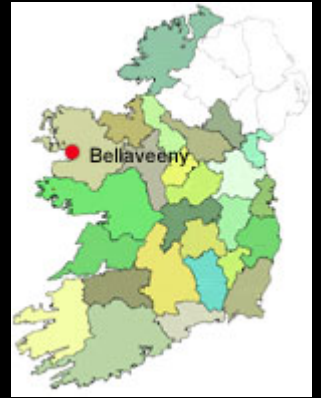


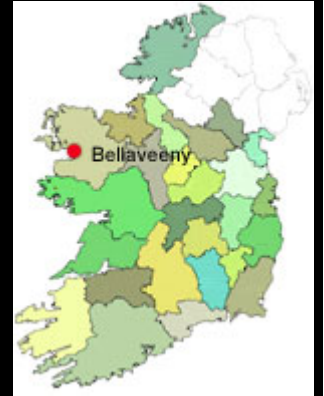


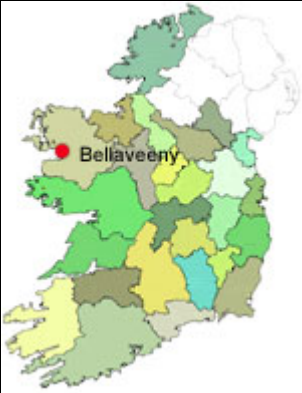


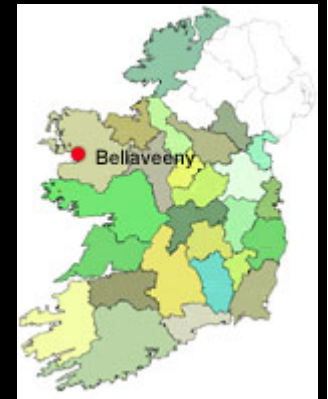


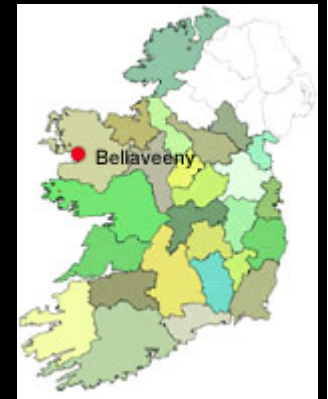




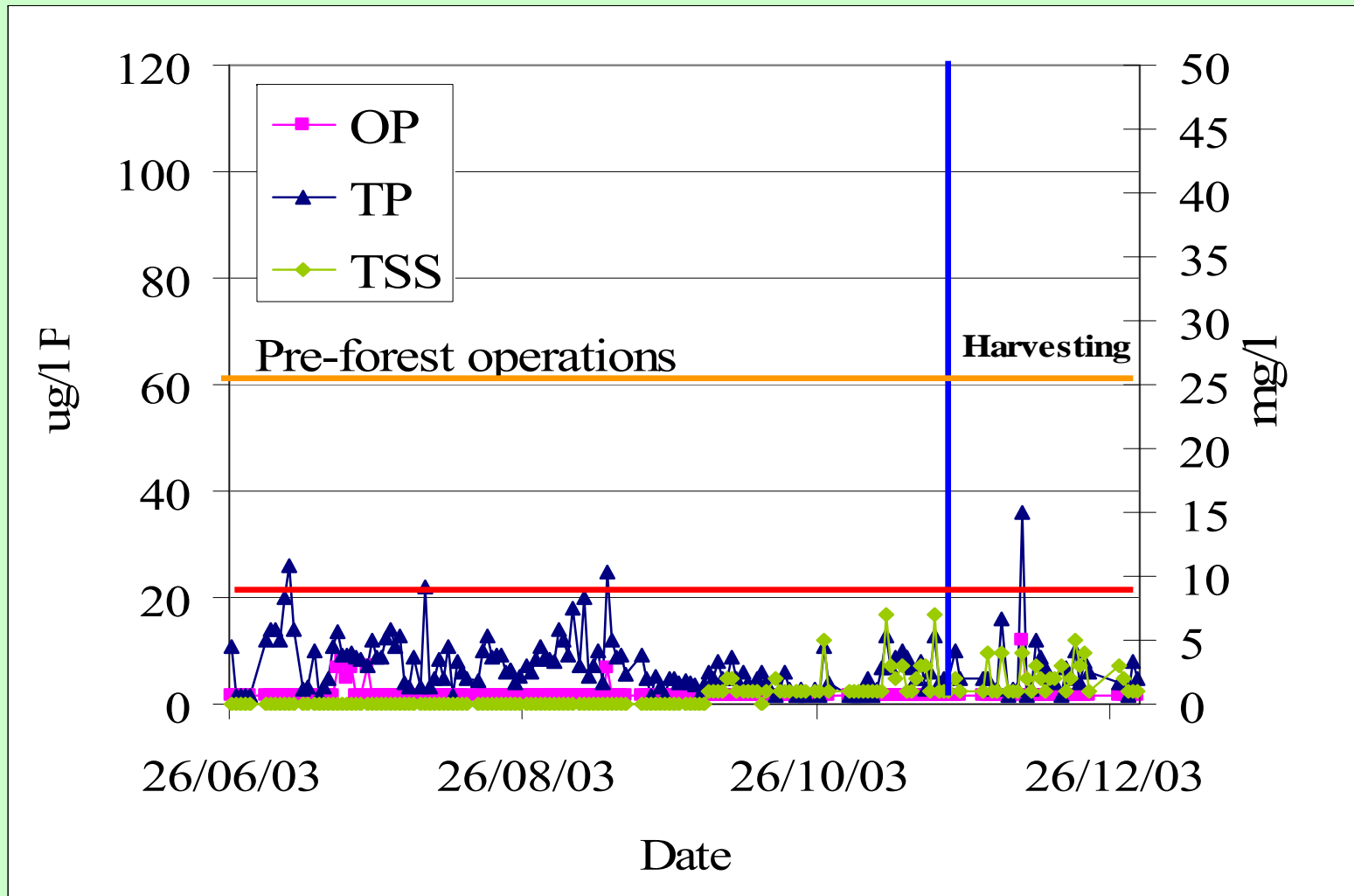
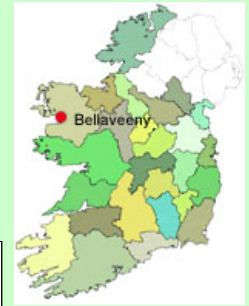








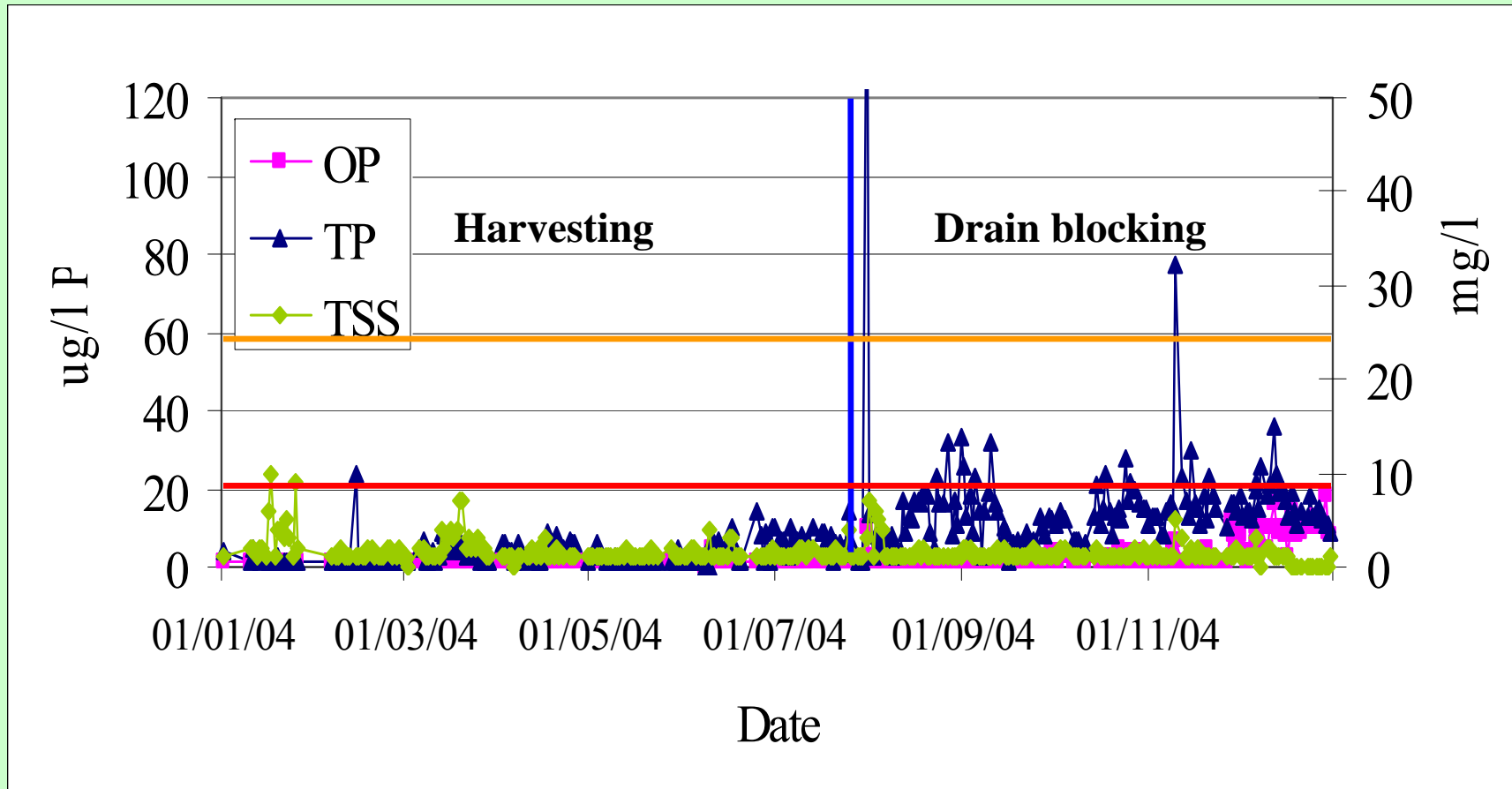
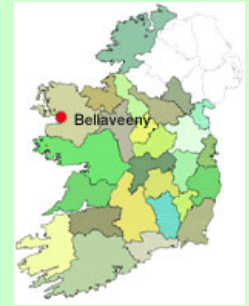
Results



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



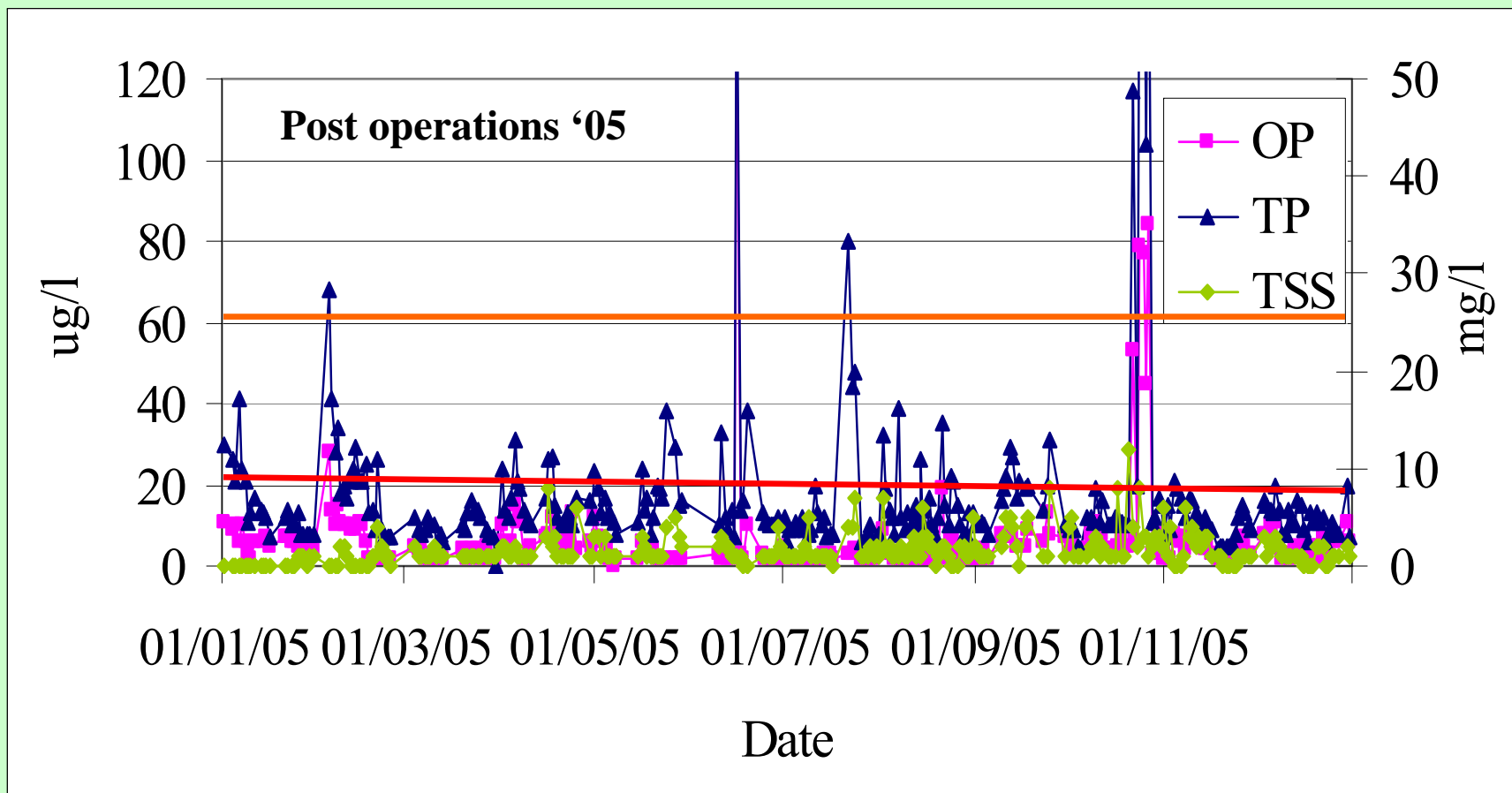
Results



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



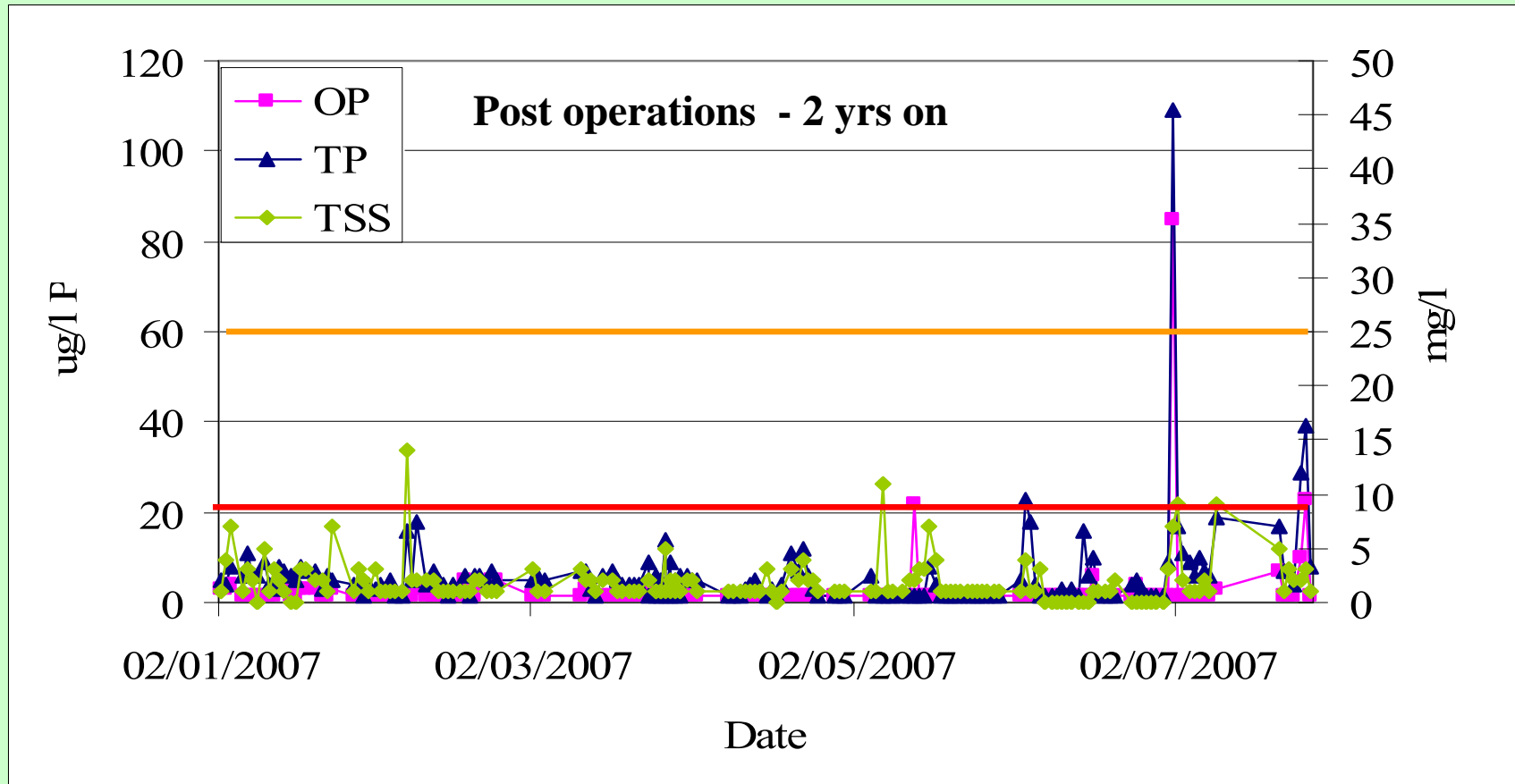
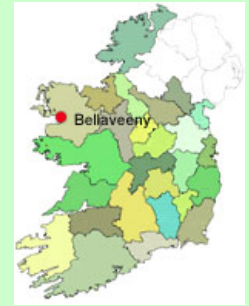
Results



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



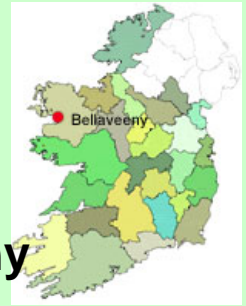
Results



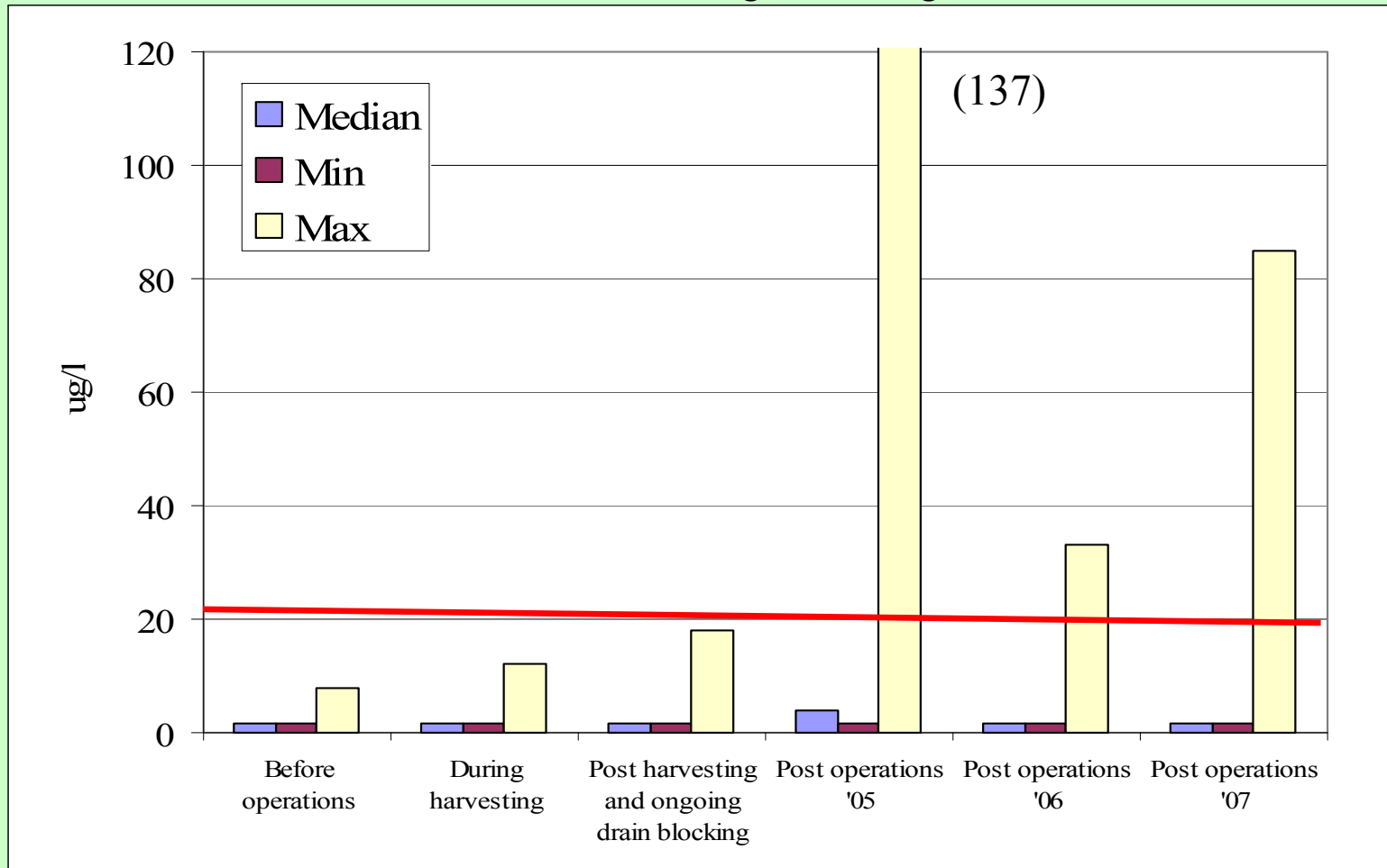
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Results

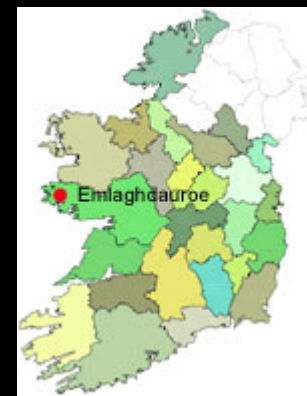
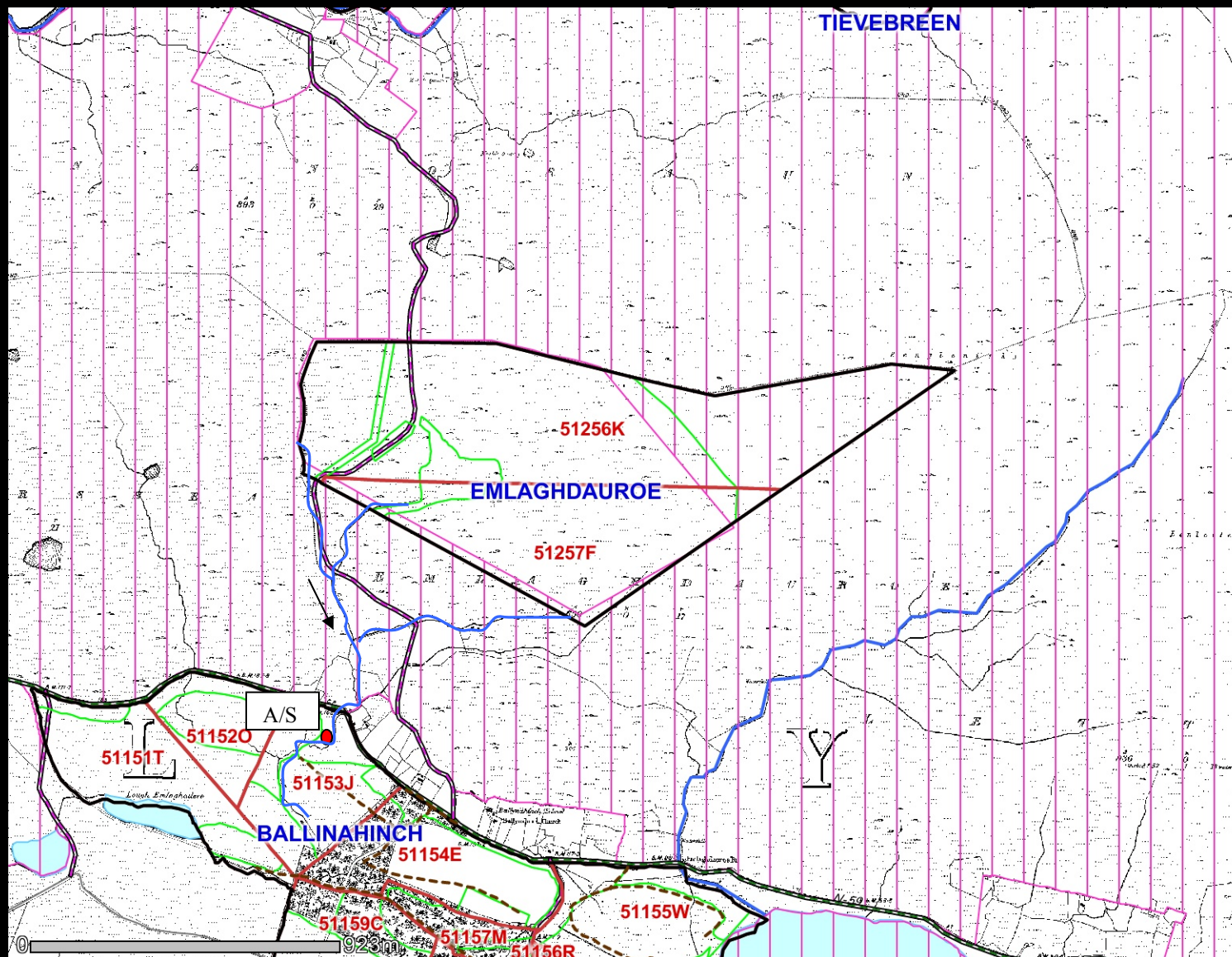


Ortho-P concentrations at various stages of bog restoration at **Bellaveeny**



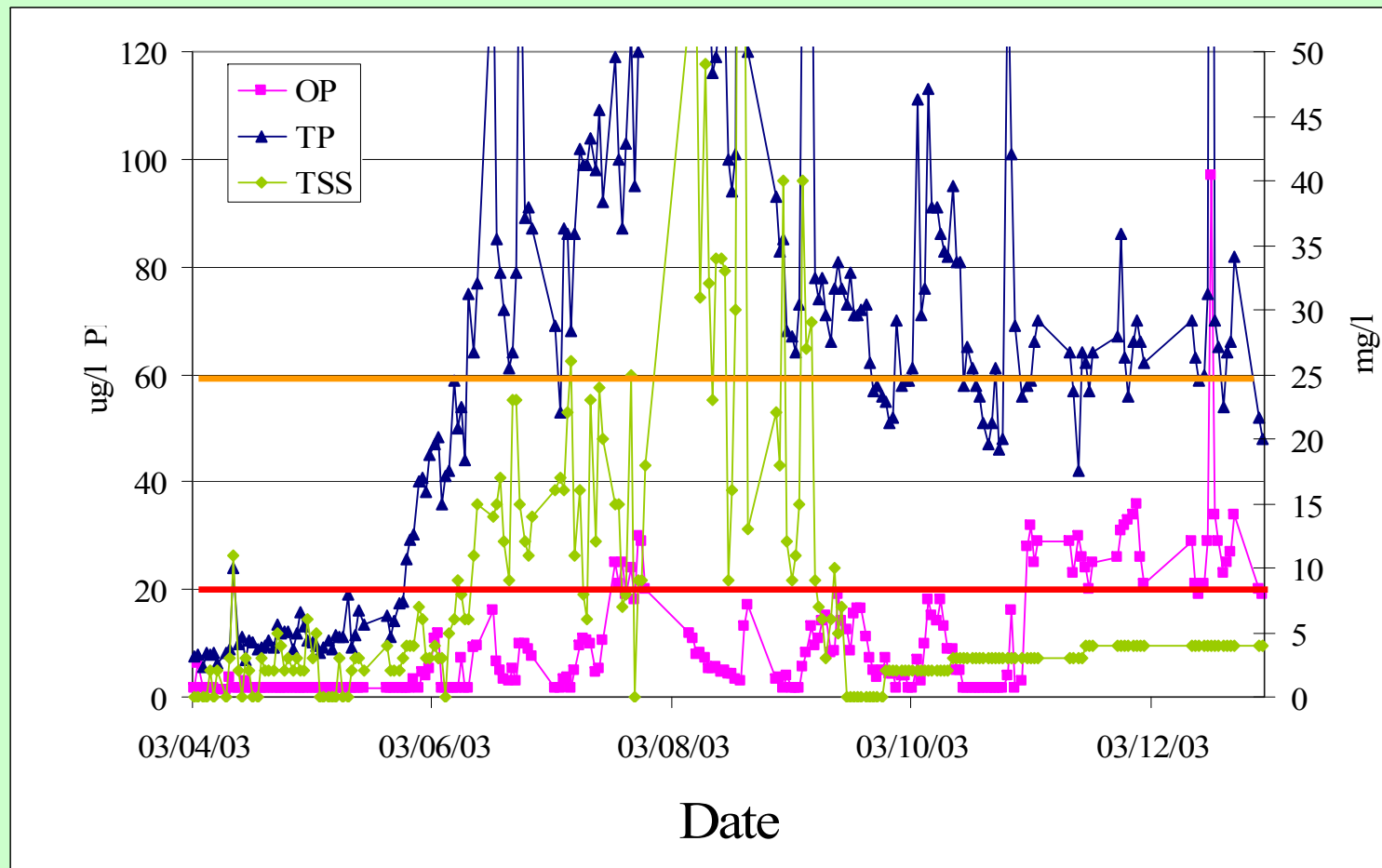
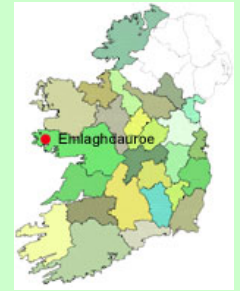
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07





Results

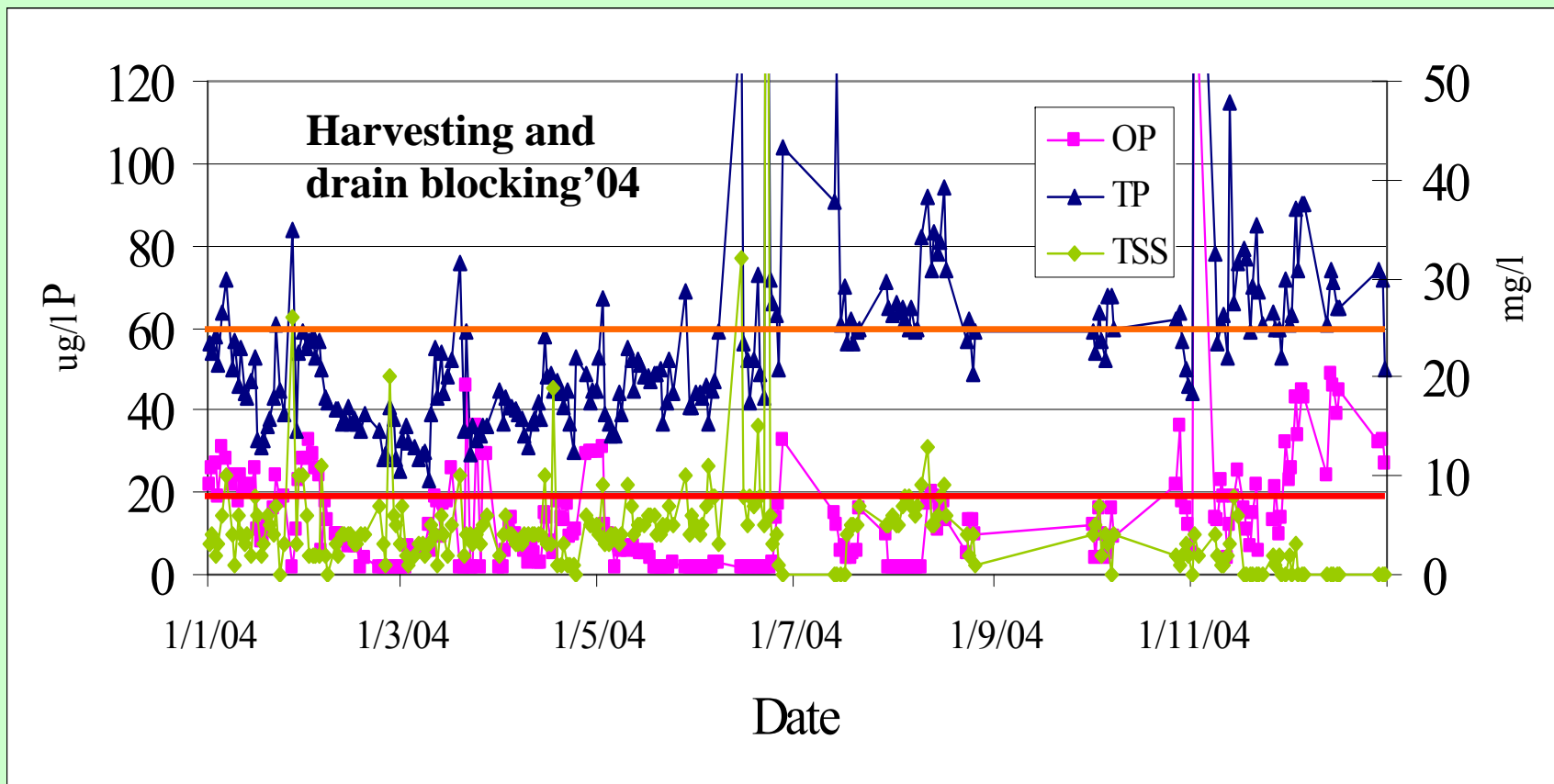
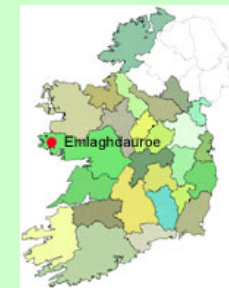
Harvesting and road resurfacing at Emlaghdauroe, Co. Galway



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



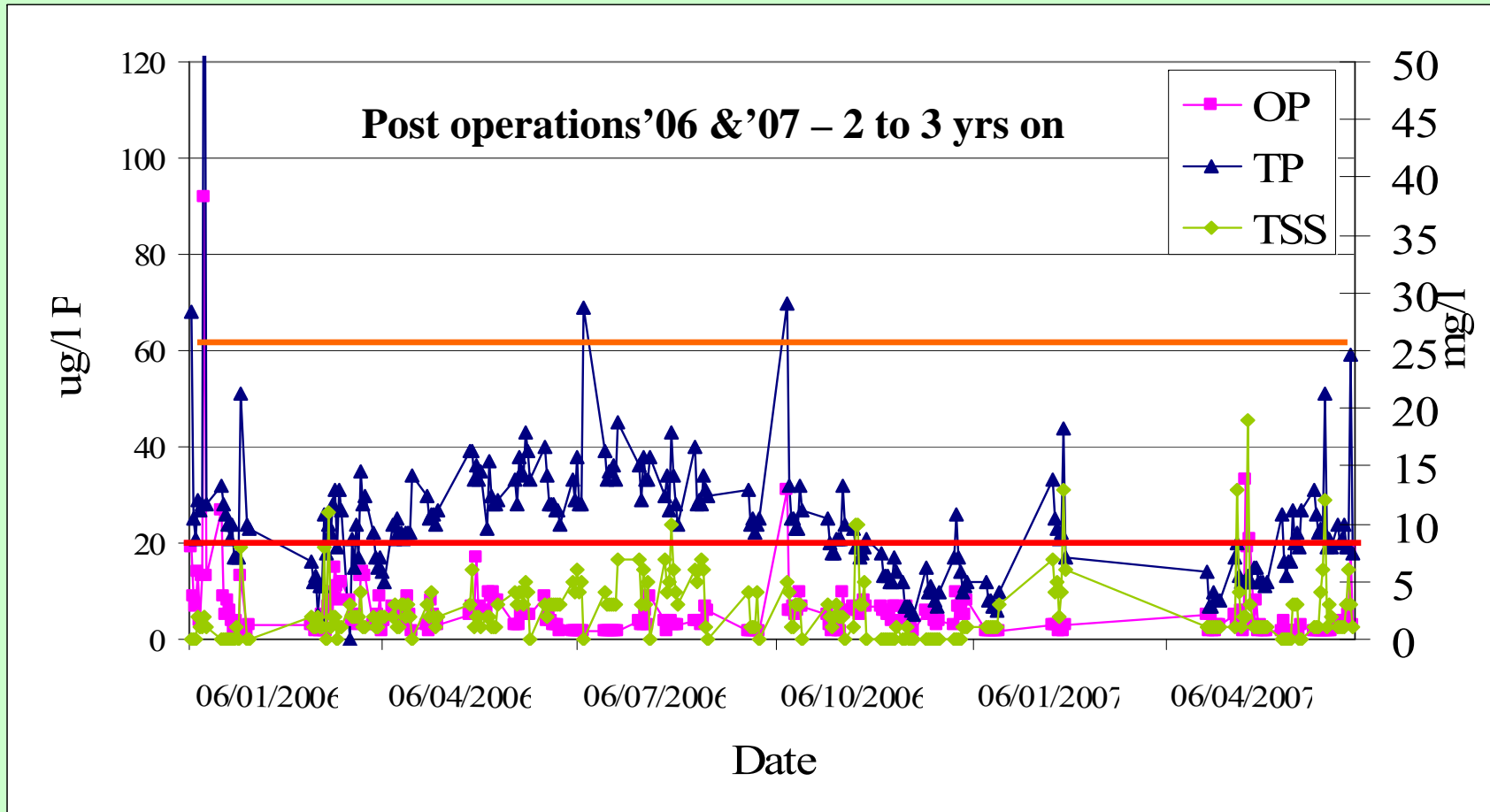
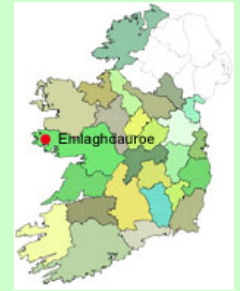
Results



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



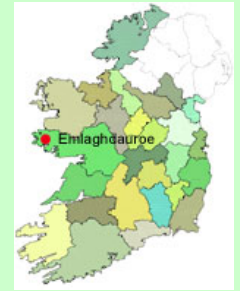
Results



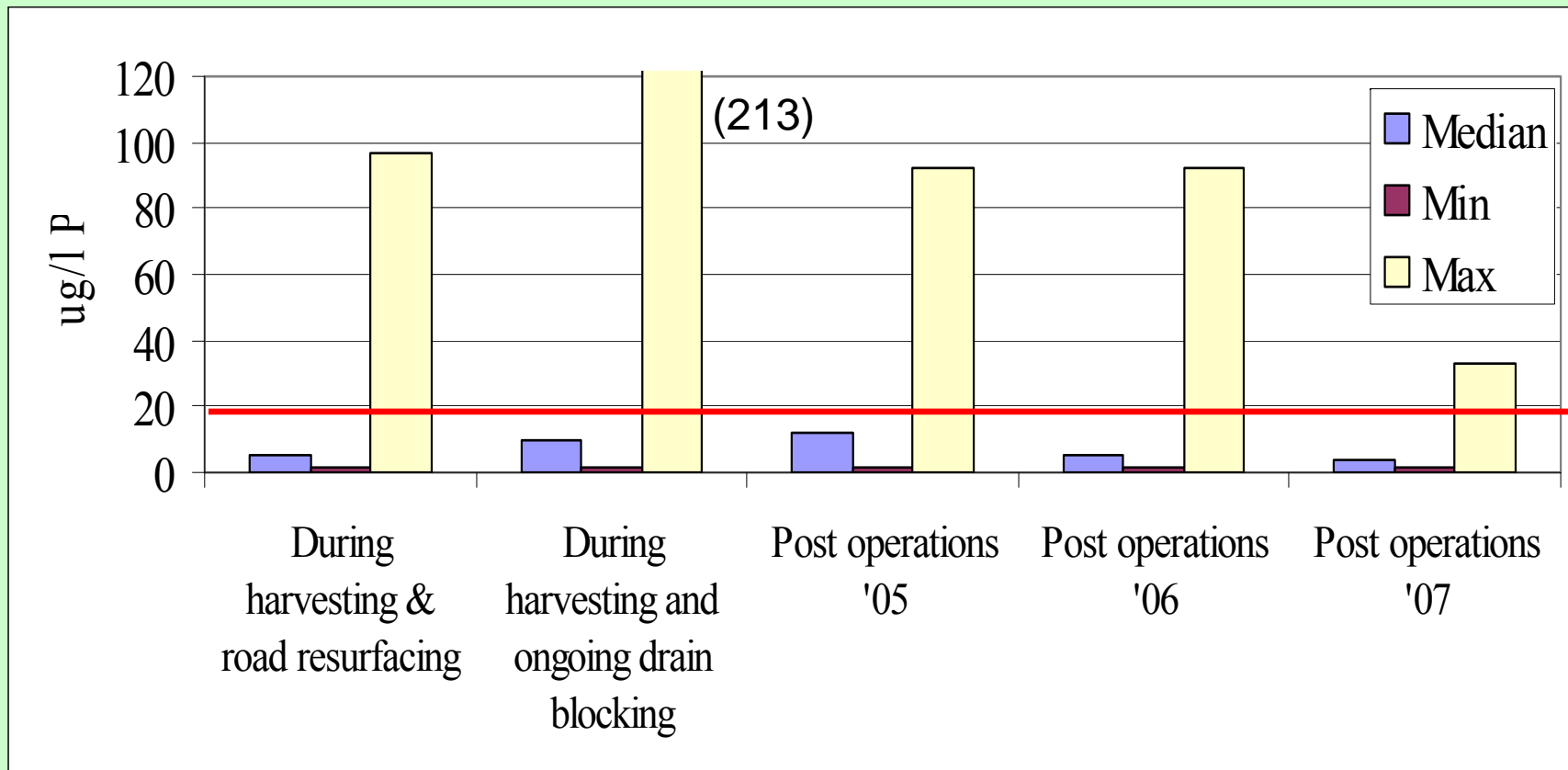
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Results



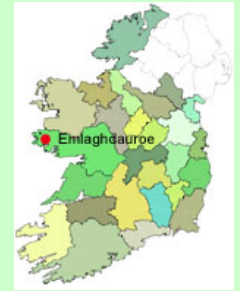
Ortho-P concentrations at various stages of bog restoration at Emlaghdauroe



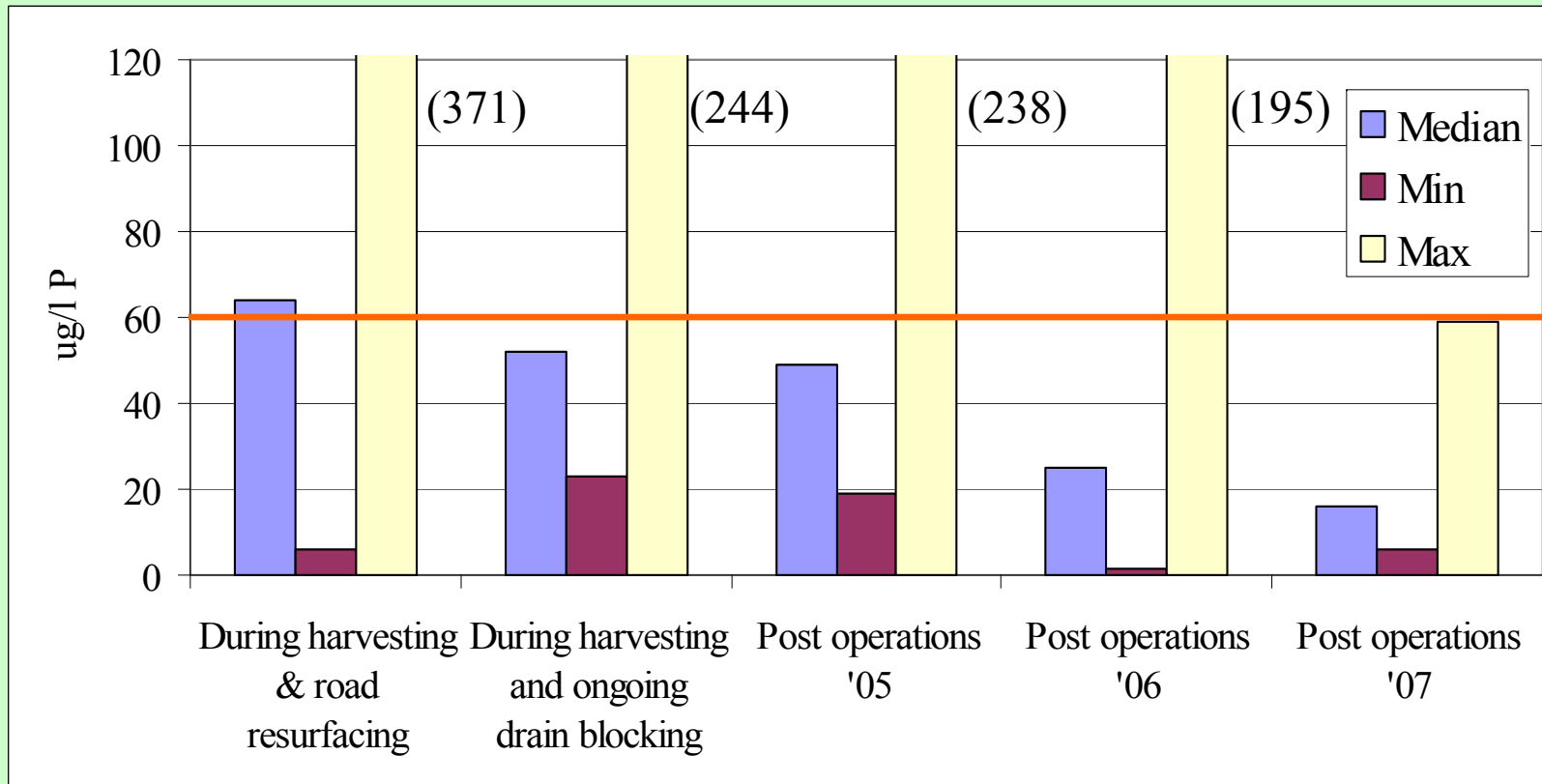
'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Results



Total P concentrations at various stages of bog restoration at Emlaghdauroe



'Bringing the Bogs back to LIFE', End of Project Conference, Westport, Oct.'07



Something in the water?



Thank you!

