

Phosphorus Awareness Day: Nutrients and catchment education

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P-Day is the name given to a Phosphorus Awareness Day that is held in the Hunter-Central Rivers Catchment Management Authority (CMA) region each November. P-Day provides a hands-on approach to education about nutrient reduction by Waterwatch groups around the Hunter-Central Rivers CMA region, testing water quality in their local waterway.

Nutrients enter the waterways through a variety of sources, including:

- Sediments from erosion
- Manure from feedlots, grazing, dairies & pet droppings
- Septic tank effluent
- Phosphate-based detergents
- Decaying plant material
- Fertilisers (eg. Superphosphate)
- Industrial waste

Consequences of excess nutrients include:

- Abundance of algae & aquatic weeds
- Waterways choked with vegetation resulting in reduced penetration of light
- Reduced dissolved oxygen leading to fish kills
- Reduced animal and plant diversity
- Blue-green algal blooms
- Increase Biological Oxygen Demand
- Eutrophication (the enrichment of a water body by inorganic plant nutrients)

P-Day was first held in 1998, and has since occurred in 1999, 2001, 2003, 2004, 2005, 2006 and now 2007.

Hunter-Central Rivers Waterwatch groups are divided into two categories:

- Junior (Primary schools) or Community groups – monitor temperature, pH, salinity and turbidity
- Senior groups (includes high schools, some community and landholders) – monitor temperature, pH, salinity, turbidity, available phosphate and dissolved oxygen.

Invitations to all registered Waterwatch groups are sent out a month prior to P-Day. Groups are asked to register their involvement. Information and special P-Day result sheets are sent out to registered groups.

All groups are required to undertake water quality monitoring at their registered Waterwatch monitoring site during the nominated P-Day week window. In 2007 this was from 18-24 November 2007.

After testing, groups upload their results to the NSW Waterwatch website www.waterwatch.nsw.gov.au. The NSW Waterwatch website is an online database of all data collected by groups across the state. Data can be viewed online by Coordinators, and by the community through the 'Your Water Quality' section.

As primary schools and some community groups cannot test for available phosphate, arrangements are made for Waterwatch Coordinators to collect a water sample from them, to test available phosphate. These results are added to those already uploaded by the group.

After P-Day week, results are downloaded by Waterwatch Coordinators and collated from across the CMA region – Central Coast, Hunter-Central Rivers, and Manning-Great Lakes Waterwatch areas. Available phosphate results are categorised using the following table:

Category	Available PO4 (mg/L)
Low	< 0.06
Medium	0.06 – 0.15
High	>0.15 – 0.45
Very High	>0.45

These categorised results are then plotted on to a CMA map, with each category a different coloured mark. This is to highlight where the low to very high results have occurred across the CMA region.

The map and all the results are added to the P-Day Powerpoint presentation and sent out to all participating groups, with a small prize for their involvement – in 2006 it was a small pin badge, in 2007 a P-Day 2007 frog bookmark.

Sponsorship for P-Day is provided by Hunter-Central Rivers Waterwatch and Hunter Water Corporation for P-Day materials and part-time staff time for event organisation. In 2007, Hunter Water Corporation provided \$2200 towards the event.

The P-Day 2006 presentation can be downloaded from the Hunter-Central Rivers CMA website, under Waterwatch publications at: www.hcr.cma.nsw.gov.au/publications/. The P-Day 2007 presentation will be available in February 2008 on the website.

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