

**CRITICAL ASSESSMENT OF
EPA GUIDANCE ON
EMPIRICAL APPROACHES FOR
NUTRIENT
CRITERIA DERIVATION**

John C. Hall

Dominic M. Di Toro

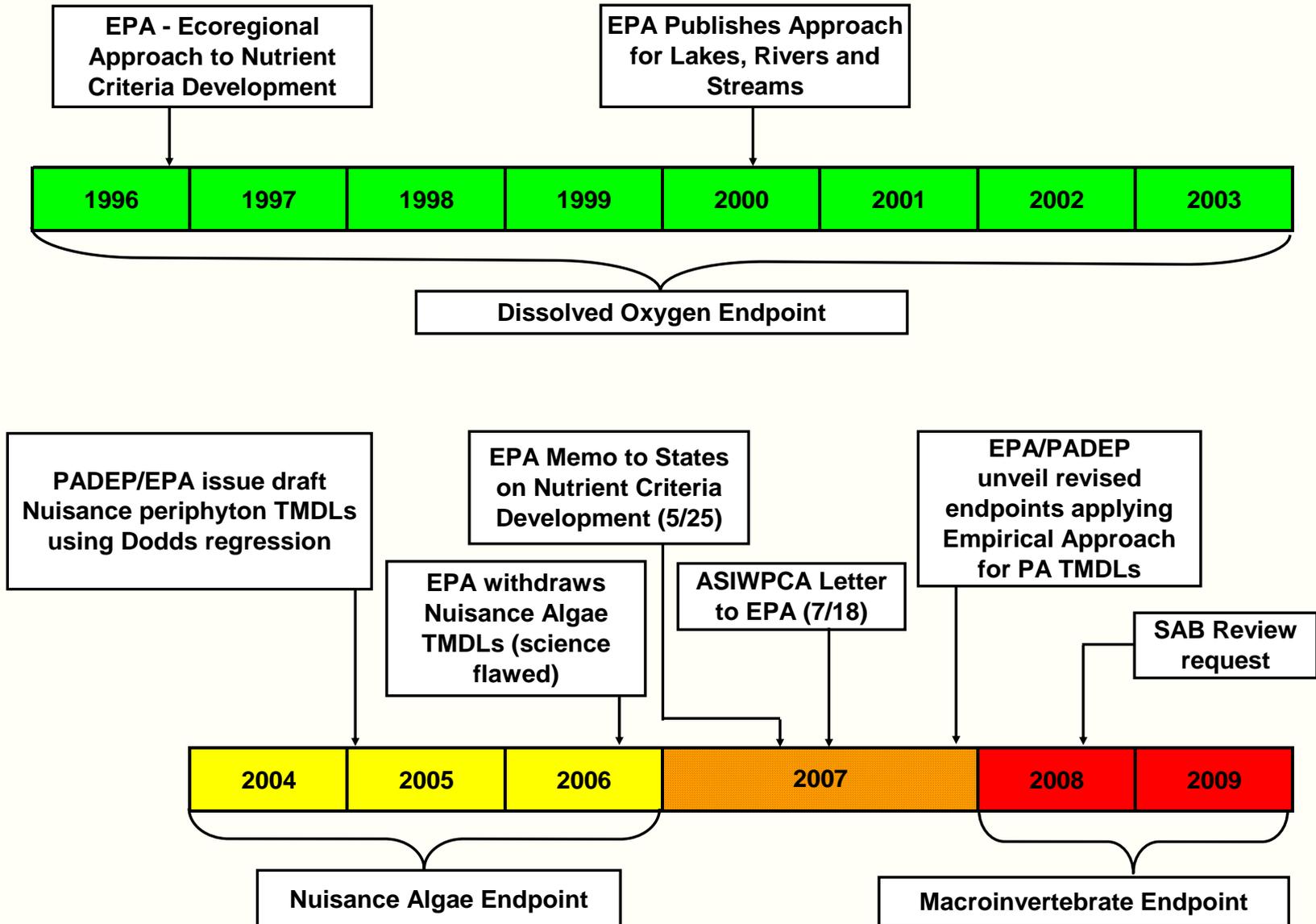
William T. Hall

Thomas W. Gallagher

PRESENTATION TO SAB

- How We Got Here – John C. Hall
- Major Concerns – Dominic M. Di Toro
- Empirical Approach Evaluation – William T. Hall
- Appropriate Methods To Reduce Uncertainty – Thomas W. Gallagher
- Recommended Approach – Dominic M. Di Toro

EPA Nutrient Criteria Development Timeline



2009 EPA APPROACH TO STREAM NUTRIENT STANDARDS

- Ignore plants, assume nutrients directly impair macroinvertebrate/algal communities
- Claim literature review sufficient to impose stringent limits (*no site-specific cause/effect evaluation*)
- Conditional probability “confirms” stressor relationship (low R^2 acceptable - 0.1)
- EPA wants nationwide implementation of new methods

PLANT GROWTH

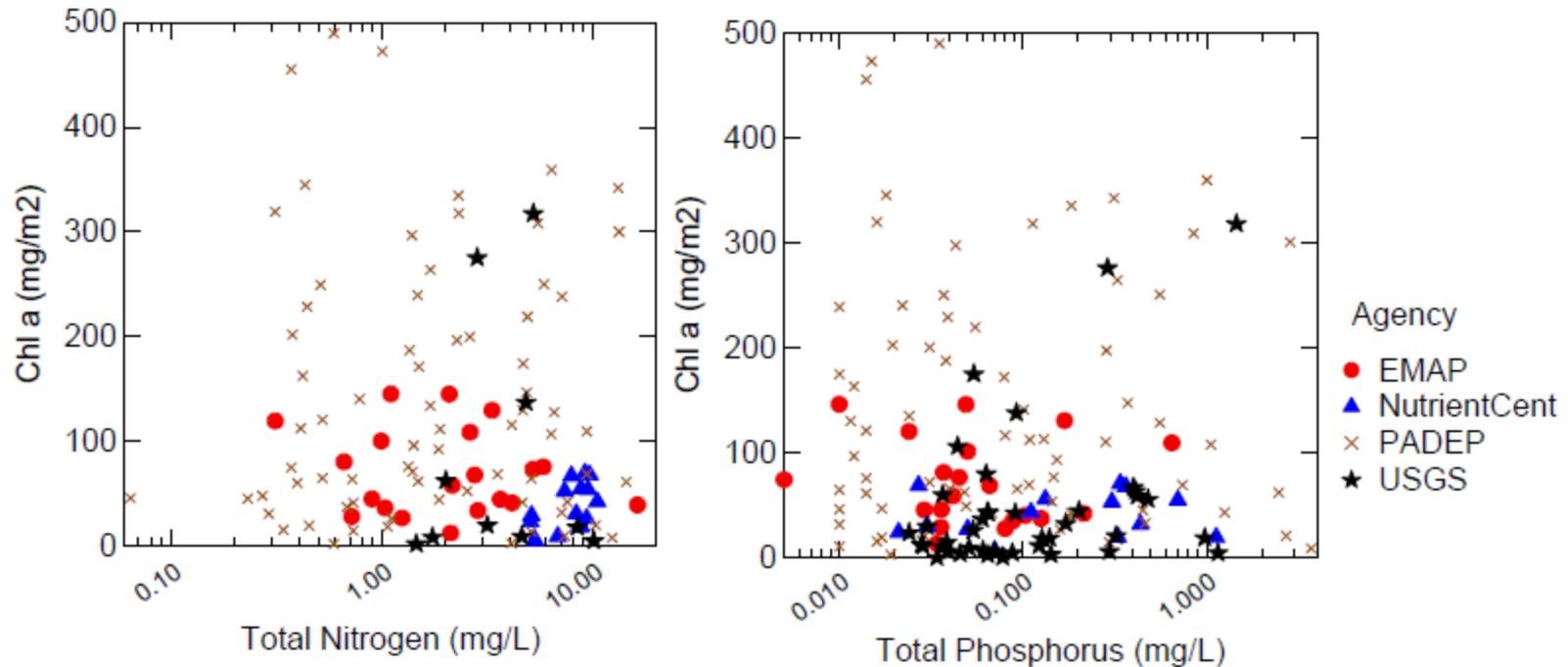


Figure 4 - Site average Chl a concentrations in relation to average TN and TP concentrations in the Northern Piedmont ecoregion. Data were collected by four different programs.

WHAT IS AT STAKE

- Most important SAB decision in decades that will control 100s of billions in municipal/commercial expenditures
- EPA wants/needs SAB peer review approval to launch this new simplified method
- Our view - EPA's methods will force unnecessary reductions, misdirect impairment restoration efforts and waste energy/resources on an unprecedented scale
- Opportunity to put EPA on the correct track for nutrient control and stream impairment abatement