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## Research quality studies

### Evaluating and modelling water quality in eutrophic lakes, ponds and reservoirs

#### Eutrophication

- Limnological survey and experimental design, monitoring plans
- Prediction of seasonal lake averages of nutrients, phytoplankton and anoxia
- Quantification and modeling of nutrient loading, in particular sediment released phosphorus (“internal P load”) using mass balance, statistics and regression models
- Prediction and causal investigations of algal and cyanobacterial blooms

#### Scenario modeling

- Pre- and post-development, remediation, climate dependency
- Necessity of catchment remediation, incl. stormwater detention ponds

#### Feasibility studies for (in-) lake restoration

- Lake or reservoir bottom water withdrawal, lake circulation and aeration, addition of phosphorus adsorbing chemicals

#### Education and outreach

- Presentations, workshops, reports
- Peer-reviewed publications
- Associated editor of the NALMS(.org) journal *Lake and Reservoir Management*

#### Qualifications

- Ph.D 1984 McGill University
- Extensive case studies, 30 year experience
- Various clients and collaborations
  - Canada, the USA, and Europe
  - Federal, provincial, and municipal governments
  - Engineering firms
  - Public interest, lake associations, private sector

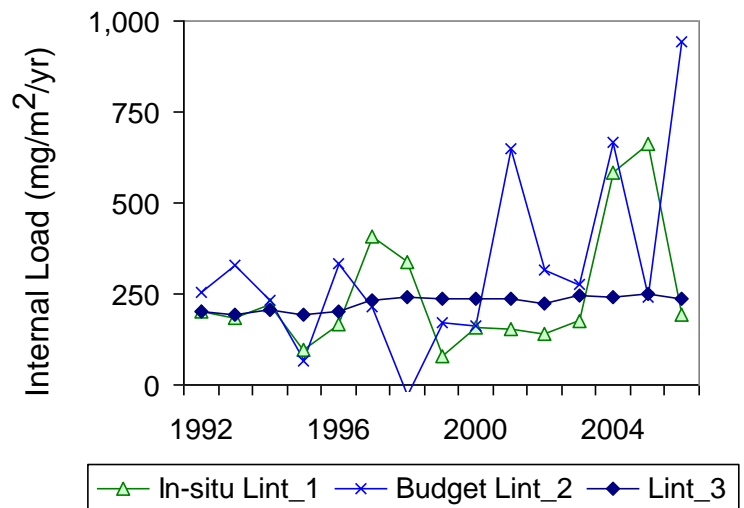


FIG. 6. Nürnberg, G.K. 2009. Assessing internal phosphorus load – problems to be solved. *Lake Reserv. Manage.* **25**, 419-432  
<http://www.tandfonline.com/doi/full/10.1080/00357520903458848>

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