



Path to EPA

Dr. Marcus W Beck, Ecosystem Ecologist and Data Scientist



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2002-2009

- BSc in Zoology
- Intern for Florida
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- MSc in
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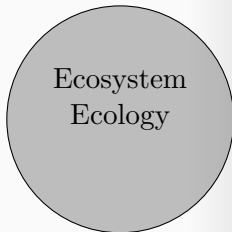
2010-present

- Intern for Minesota DNR
- PhD in Conservation Biology
- Post-doc at GED



My interests

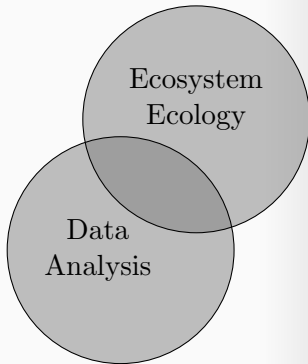
- Water quality
- Biological monitoring
- Eutrophication
- Aquatic Macrophytes
- Ecosystem metabolism





My interests

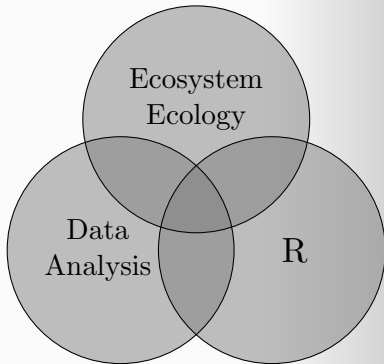
- Indicator development
- Time series methods
- Reproducible research
- Visualization and graphics
- Model comparisons





My interests

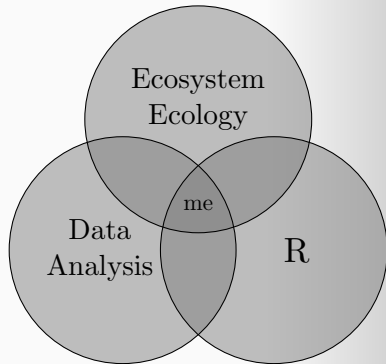
- NeuralNetTools
- SWMPPr
- WtRegDO
- WRTDStidal
- ggord
- rStrava





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Past work - Biological assessment of lakes

How appropriate is a biological index for characterizing effects of multiple stressors? Will it work within a regulatory framework?



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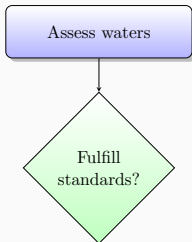
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Assess waters



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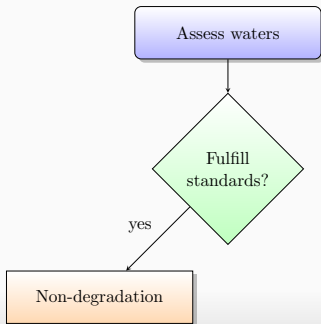
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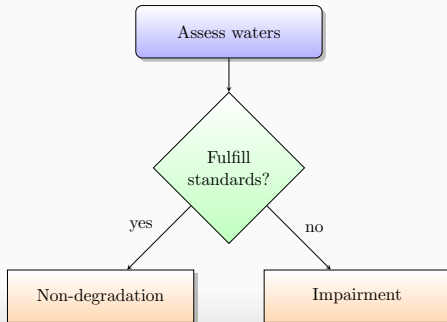
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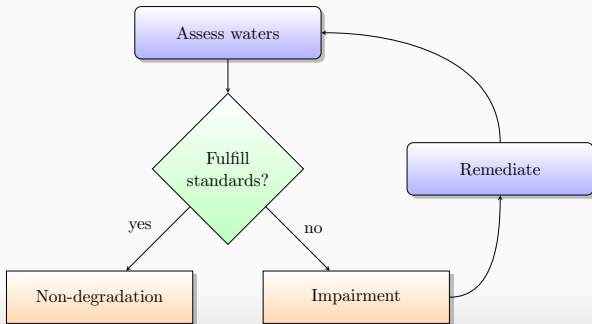
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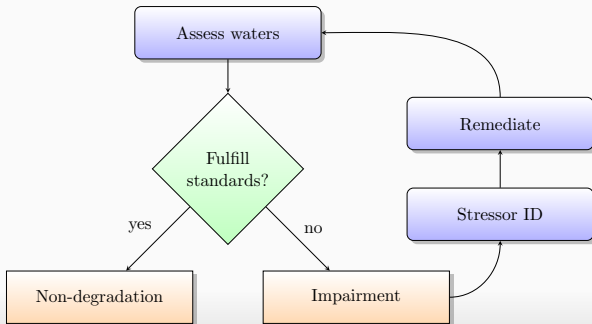
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Current work - Evaluating estuarine condition

How can we leverage monitoring data to develop our conceptual model of eutrophication?

*Eutrophication (noun) - an **increase** in the rate of supply of **organic matter** to an ecosystem*



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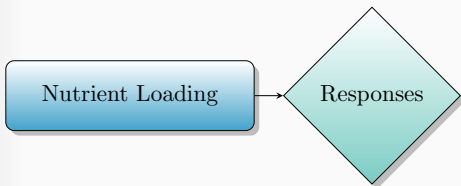
Nutrient Loading



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