

# R3 Water Quality Measure Initiative


ASIWPCA TMDL Work Group for  
Environmental Results and Innovation

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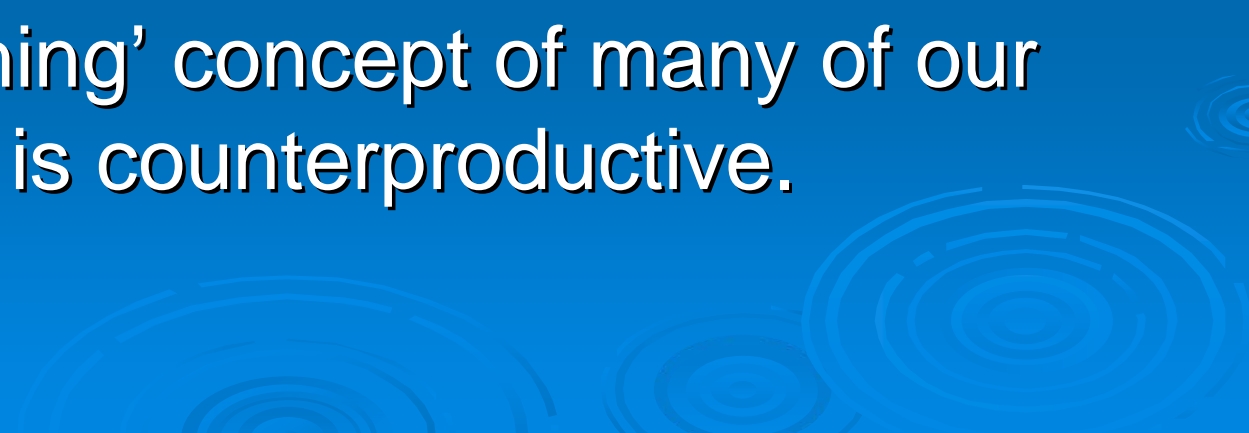
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# The Challenge...

*To report incremental changes in water quality and clearly communicate that progress for the water program in terms useful for water quality managers and the public.*

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# Our Message Influences

- Incremental progress reporting is critical.
  - Results on impairments and delistings are important but incomplete.
  - ‘All or nothing’ concept of many of our measures is counterproductive.
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# Current Region III Proposal

- Report of percentage of water quality measurements with improving trends in water quality values in comparison to a reference period.
- A framework applicable to multiple parameters and multiple scale options.

# Proposal Highlights

- Use data to establish reference period and establish 75%, 25% and inter-threshold values (VADEQ approach).
- These define intervals of higher, moderate, and lower water quality.

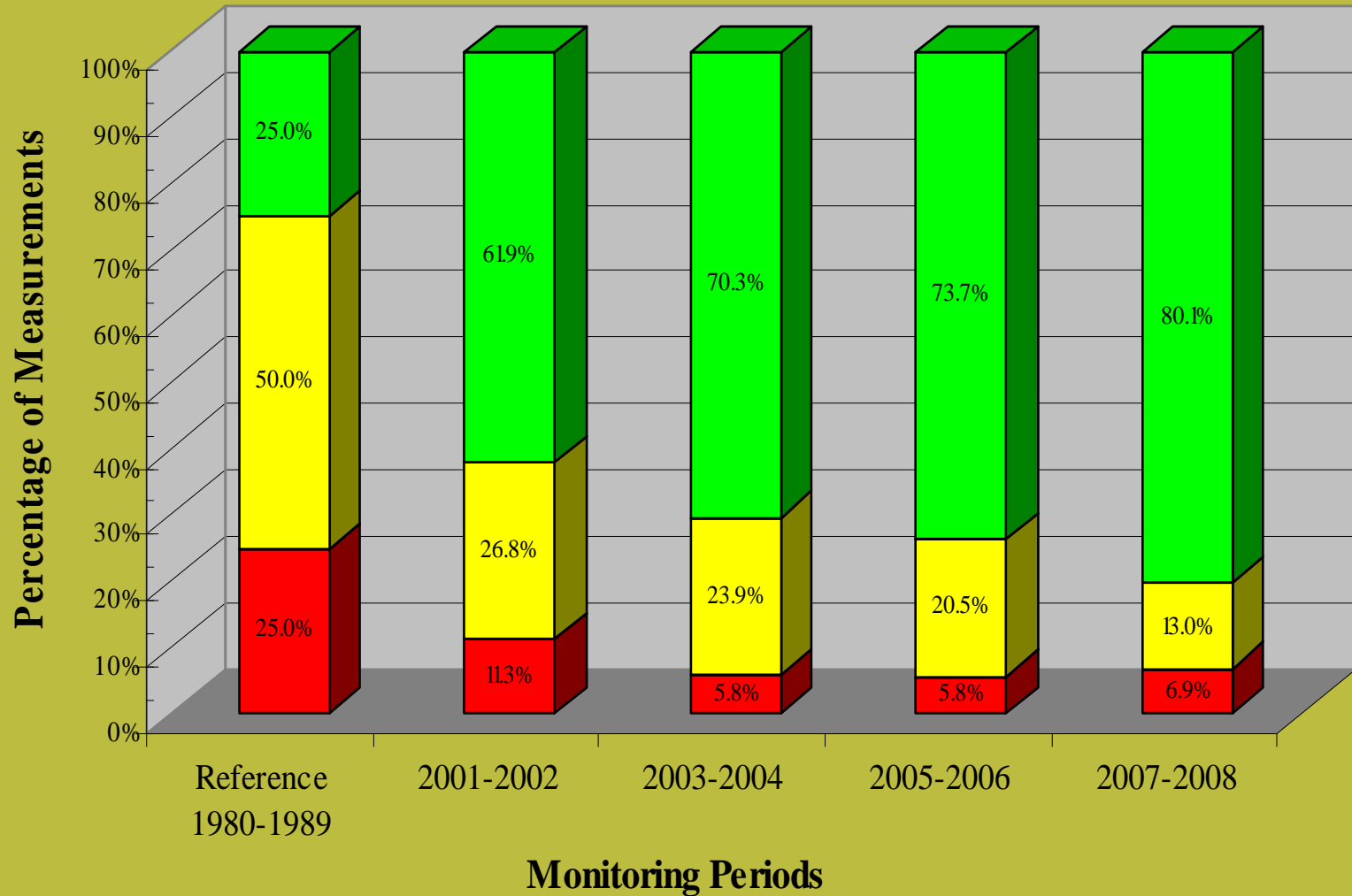
# Proposal Output

- Compare distribution of values during subsequent reporting periods to the reference values.
- Determine percentage of values added to the higher water quality increment. **This is the percentage that is reported by parameter(s).**

# Potomac Basin TP Example

- Data pulled from multiple jurisdictions.
- 1980-89 reference period established.
- 2007-2008 interval period showed 80.1% of samples above reference threshold for 'good' water quality – 55% change.

## Proportions of TP Measurements by Water Quality Class in Relation to Reference Period



■ WQ Lower ■ WQ Moderate ■ WQ Higher

# Proposal Features

- Usable, generic approach adaptable to wide variety of datasets.
- Where data supports, shows improvements towards WQS and/or other water restoration goals.
- Can report on state/large basin conditions, watersheds, or particular class of waters.

# Proposal Features

- Likely to have core set of parameters but can be used for any pollutant with sufficient data available.
- Data can be displayed in short interval periods to highlight changing conditions and impacts of management programs and initiatives.

# Next Steps

- Draft data analyses back to agencies in January/early February.
- Refine datasets and update outputs – February/March.
- Work on Region 3 conditions report – March to June 2009.

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