

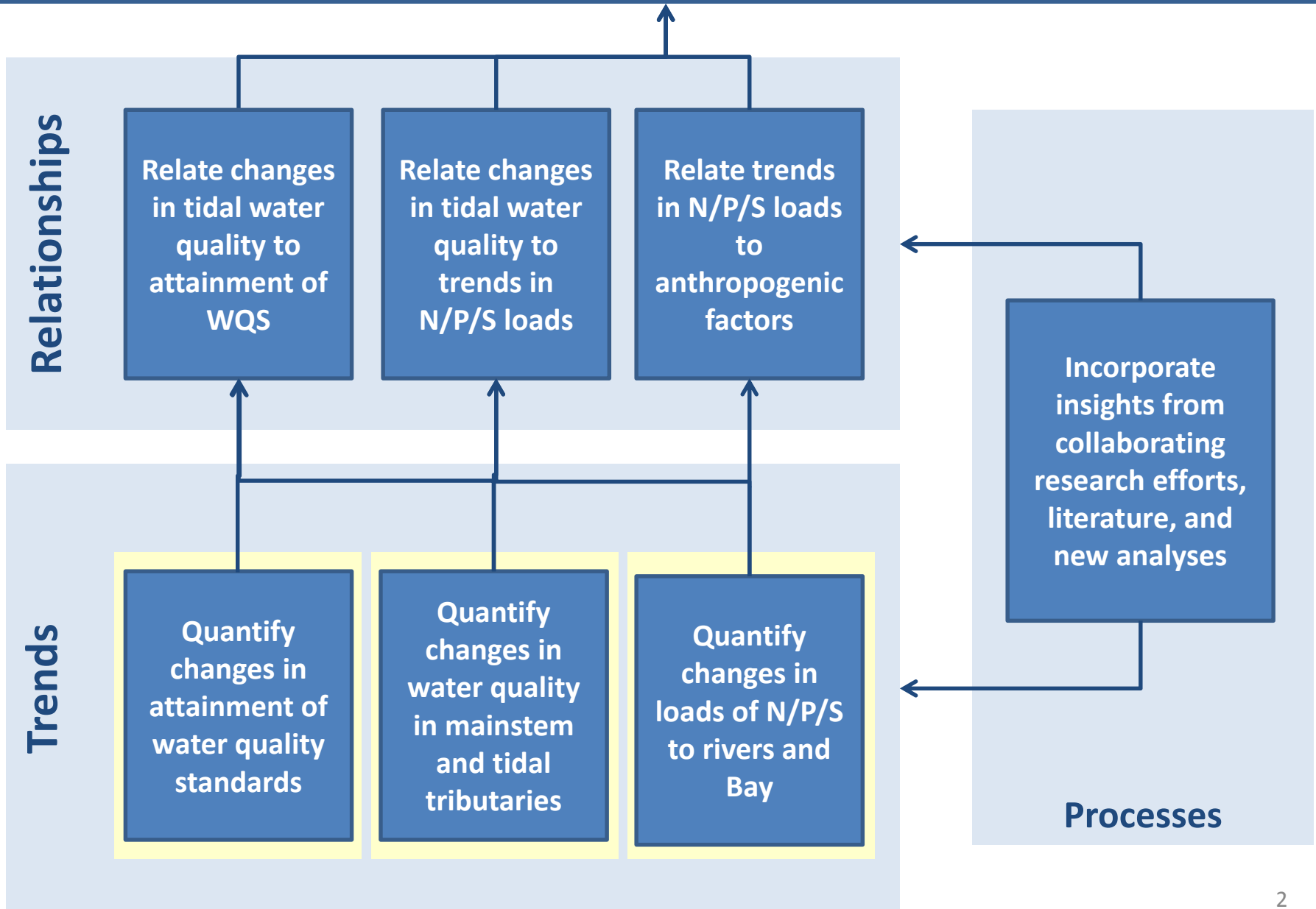
Measuring and Explaining Trends in Water Quality

USGS and CBPO Trends Teams

CBP Water Quality Goal Implementation Team Conference Call

Oct. 13, 2015

Using Monitoring Data To Measure Progress and Explain Change



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Outline

Quantify changes in loads of N/P/S to rivers and Bay

- A brief primer on trends in loads from the watershed
Doug Moyer and Joel Blomquist (USGS)

Quantify changes in water quality in mainstem and tidal tributaries

- Quantifying and explaining Trends with Generalized Additive Models (GAMs)
Rebecca Murphy (UMCES-CBPO)

Quantify changes in attainment of water quality standards

- Incremental progress towards attainment of Water Quality Standards
Melinda Ehrich (UMCES-CBPO)

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Timeline

December 2015	Release trends in nutrient and sediment loads for nontidal monitoring stations
June 2016	Finalize summary of patterns in water-quality criteria attainment over time in tidal waters from 1985-2014
Annually, beginning in 2016	Implement new process for quantifying trends in tidal water-quality parameters, incorporating advances in methods to provide more information on changes over time (UMCES/EPA, MD DNR, VADEQ)
Ongoing 2016-2017	Provide updates of nutrient and sediment load trends in the watershed to help assess progress toward implementing the Bay TMDL. Updates of loads at the River-Input Monitoring stations will be provided annually with results from additional stations in the nontidal network provided every two years (USGS working with States and EPA).
	Continue to explain watershed trends of nutrients and sediment to support the Mid-Point Assessment. The effects of nutrient sources, land-use change, and BMPs will be investigated and presented for the watershed and several major source sectors (agricultural, urban, and atmospheric deposition). (USGS, EPA, and academic partners working through the Scientific, Technical Assessment, and Report (STAR) team.)
	Continue to develop and apply new approaches for quantifying and explaining water-quality trends in tidal waters
	Test watershed factors influencing water-quality trends in tidal waters

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Feedback

- 1. Is this the level of technical information that you'd like to see?**
- 2. Are there questions that you have about trends in water quality that you do not see addressed by this process and the results that we plan to generate?**
 - Some of this may be due to the level of detail that we're presenting here.**
 - We can use your feedback to target content for future presentations**