

Nutrients - Overview

*Where We've Been and Where We're
Going*

by

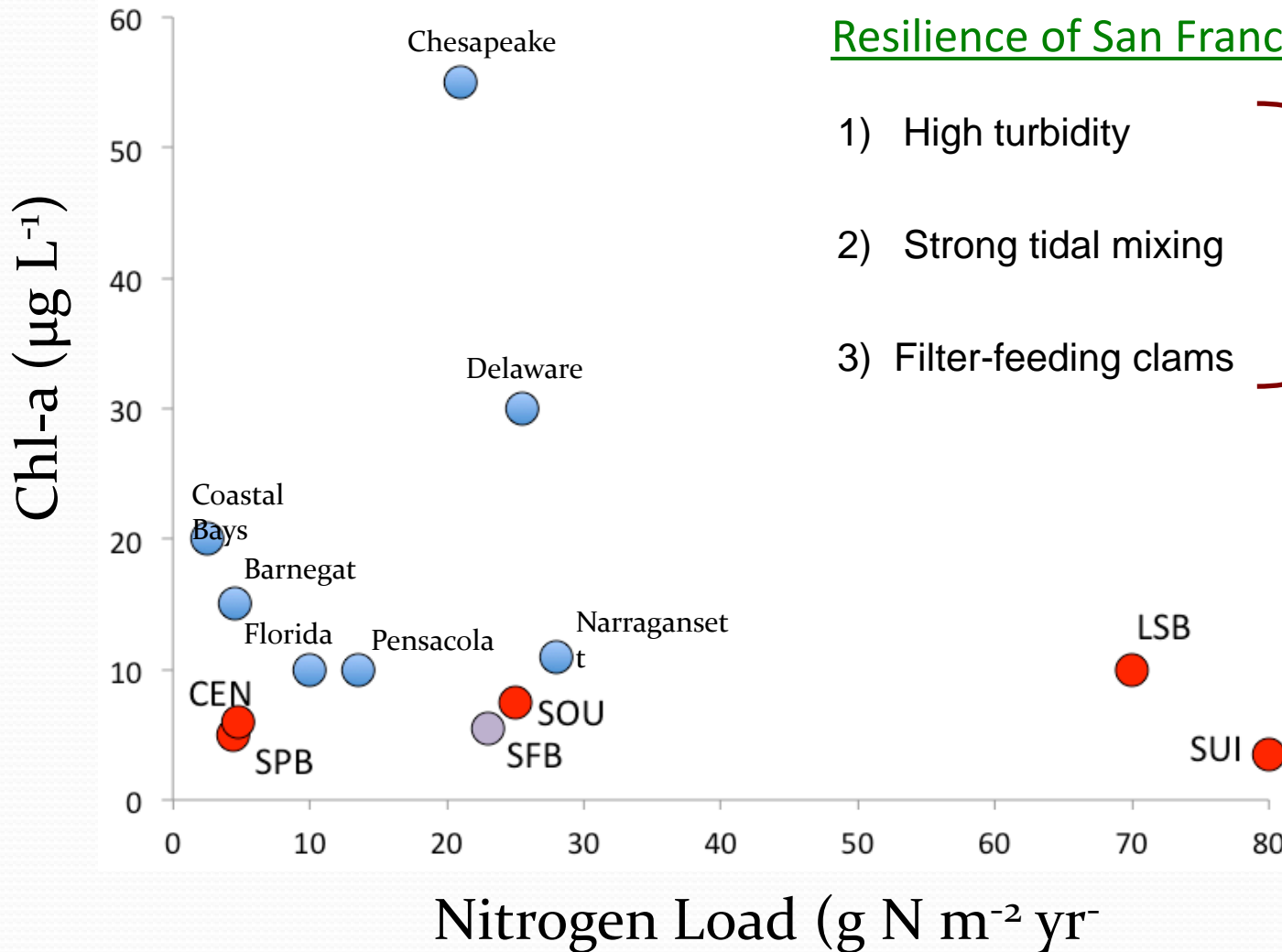
David R. Williams

BACWA Executive Director

Outline

- What we heard last year
 - Data
 - Key questions
 - Scientific approach
 - Management strategy
 - Cost
 - Regulatory vehicle
- What's happen over the past year
 - Scientific investigation/data collection
 - Regulatory approach
 - Governing the effort.

High Direct N Loads to SFB Subembayments



Resilience of San Francisco Bay

- 1) High turbidity
- 2) Strong tidal mixing
- 3) Filter-feeding clams

Subject to change?

1)

Nutrient Strategy – Key Management Questions

1. Is there a nutrient problem or signs of a future problem?
2. What are appropriate guidelines for identifying a problem?
3. What nutrient loads can the Bay assimilate without impairment of beneficial uses?
4. What is the relative contribution of loading pathways?

November 2012

San Francisco Bay Nutrient
Management Strategy

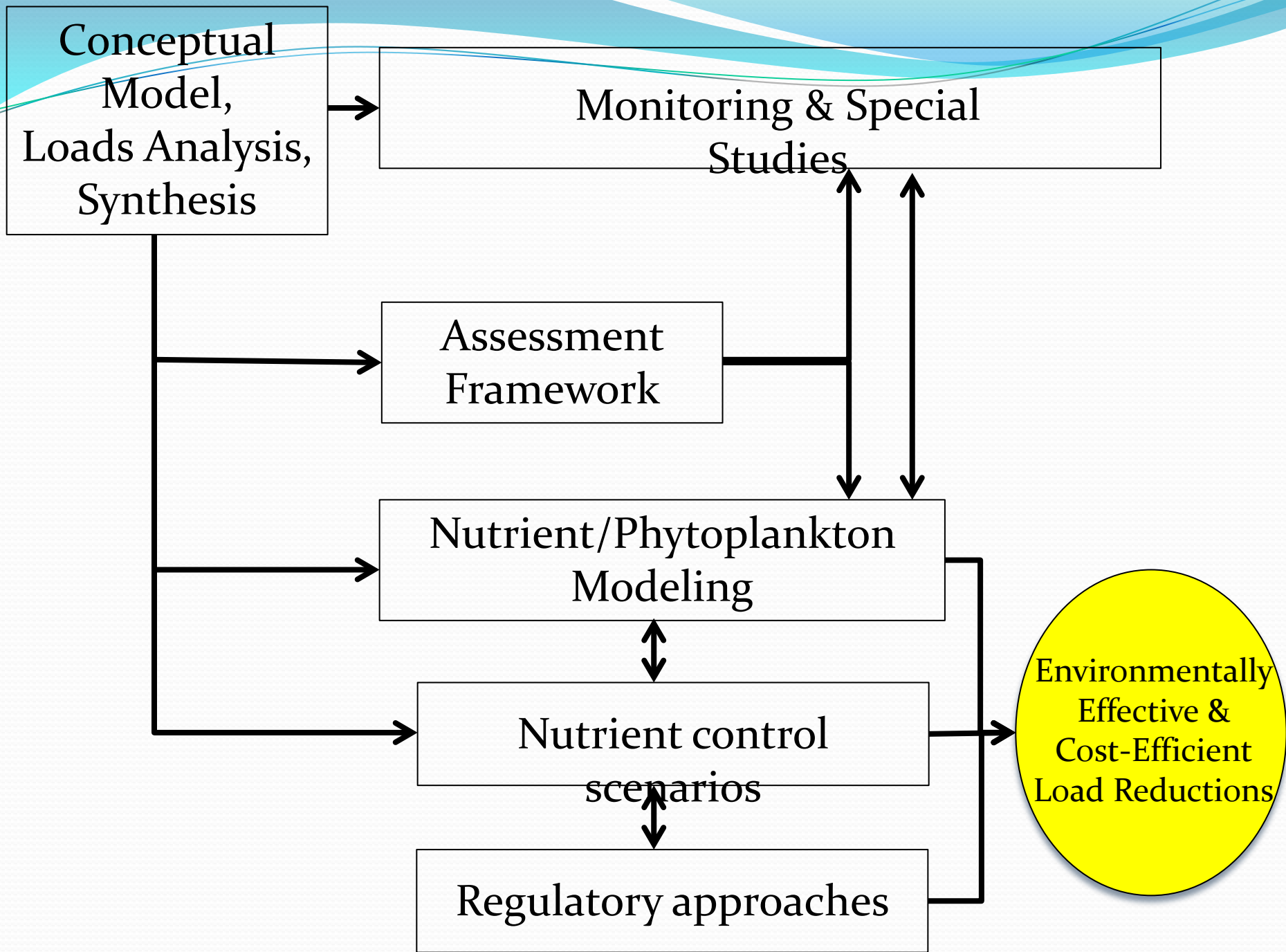
Nutrient Strategy

November 2012

San Francisco Bay Nutrient Management Strategy

San Francisco Bay Regional Water Quality Control Board

- Collect information to inform management decisions
 - 💧 Water quality standards
 - 💧 Local monitoring program
 - 💧 Modeling
 - 💧 Special Studies
 - 💧 Nutrient control alternatives



Conceptual Model, Loads Analysis, Synthesis

Monitoring & Special Studies

Assessment Framework

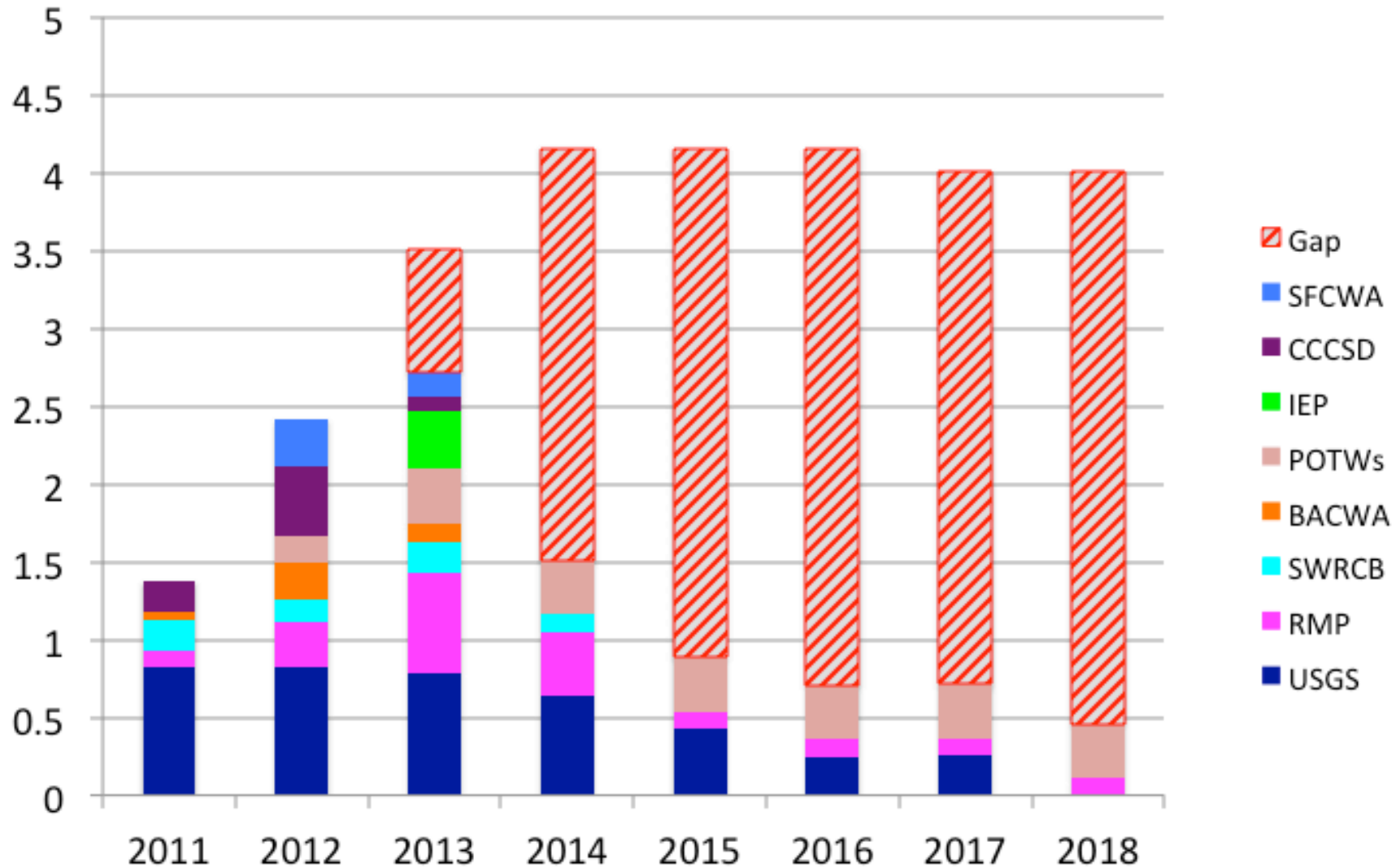
Nutrient/Phytoplankton Modeling

Nutrient control scenarios

Regulatory approaches

Environmentally Effective & Cost-Efficient Load Reductions

Funding Forecast (\$ millions)



Nutrient Implications

- New discharge requirements?
- Treatment improvements/upgrades?
- Regional Management Strategy
- New water quality standards
- Collaborative approach



Goal

Identify best regulatory framework for implementation of Nutrient Management Strategy for SF Bay

Scientific Investigations/Data Collection

- SFEI prepared the “decisions trees” i.e. the framework for the Science Plan
- In FY 2013 BACWA funded \$350k of scientific investigations
- 13267 letter required POTWs to undertake a 2-years nutrient influent/effluent monitoring effort.
- In FY 2014 BACWA is funding \$675k of scientific investigations
- Technical Symposium, October 2013

Scientific Investigations/Data Collection con't

- The Nutrient Watershed Permit will require continued funding of the scientific investigations.
- Even with BACWA funding plus other sources of funds (e.g. USGS, RPM, etc.) there is a funding gap for undertaking these studies
- BACWA seeking grants to help fill the gap
- Longer term funding needs will be identified in the Science Plan currently under development

Regulatory Approach

- In Spring 2013 BACWA sponsored a Regulatory Workshop
- The Water Board set forth the 4 key tenets of a Nutrient Watershed Permit
 - Controls to ensure the situation is not getting worse (caps, triggers, in-depth reporting)
 - Influent/effluent monitoring and reporting
 - Support for scientific investigations (Bay monitoring and modeling)
 - Optimization/upgrade investigations

Regulatory Approach con't

- Discussions were initiated to understand the myriad of issues associated with a watershed permit
- Initial discussions between a BACWA Task Force and Water Board Staff.
- Task Force expanded to include a cross section of the BACWA membership with representation by subembayment, size and types of POTW - The BACWA Nutrient Watershed Permit Negotiating Team

Regulatory Approach con't

- Negotiations continued from Oct – Jan
- Administrative Draft has been reviewed with the Tentative Order expected shortly
- Much work needs to be completed during the first 5 year permit term.
- BACWA stands ready to assist its membership in undertaking regional efforts

Governance

- The Water Board and BACWA agree that a multi-stakeholder, multi-year, financially challenging scientific undertaking is best served by an open and transparent governance structure.
- Initial discussions on the need for a governance structure started in early 2013
- The Water Board engaged the services of an experienced facilitator
- Multi-stakeholder interviews were conducted by the facilitator

Governance con't

- The consensus was that a Steering Committee operating under an agreed upon Charter offered the best model for governing the conduct of the Science Plan.
- An organizational structure has been developed that identified the various groups engaged in undertaking the Science plan
- A draft Charter is being refined that sets forth roles and responsibilities for the entities within the organizational structure.

Unique Approach

- Nutrients are among the most significant environmental issues for our nation's waters
- There are many examples across the country of unsuccessful attempts to address nutrients, often resulting in litigation
- As we move forward, the SF Bay collaborative approach can be a model for nutrient management using science driven regulations and stakeholder involvement.