

STUDY INTRODUCTION

STATEWIDE COSTS OF NUTRIENT DISCHARGE STANDARDS

Joint CDSD / DWQ Nutrient Removal Seminar

John Mackey, P.E.

2 February 2009

OUTLINE

- Planning ahead for nutrients
- DWQ Nutrient Cost Study
- Study Challenges
- POTWs Involvement
- Cost Study Schedule

Basis for Nutrient Regulation?

- Current approach including TMDL
- Good Science
- Regional nutrient criteria strategy
- Defensible Data and Results
- National secondary standards
- Stakeholder Involvement

Plan Ahead for...

- Broader or Statewide Nutrient Standards
- Infrastructure improvements
- Improvements capitalization

Planners Need:

- Results they can believe in & depend on
- Tools for analyzing situations and results
- A knowledge base from which to draw

DWQ Nutrient Cost Study

Proactive effort to:

- Establish likely impacts from potential nutrient standards
- Focus on site-specific solutions

DWQ Cost Study Will...

- Engage major point sources in planning
- Recognize the unique situation in Utah
- Seek strategic improvements with emphasis on local input
- Establish a comprehensive assessment of life cycle costs, and
- Develop a broad picture of environmental benefits

Recognize unique situations



Including climate



Many small and diverse systems



Existing infrastructure



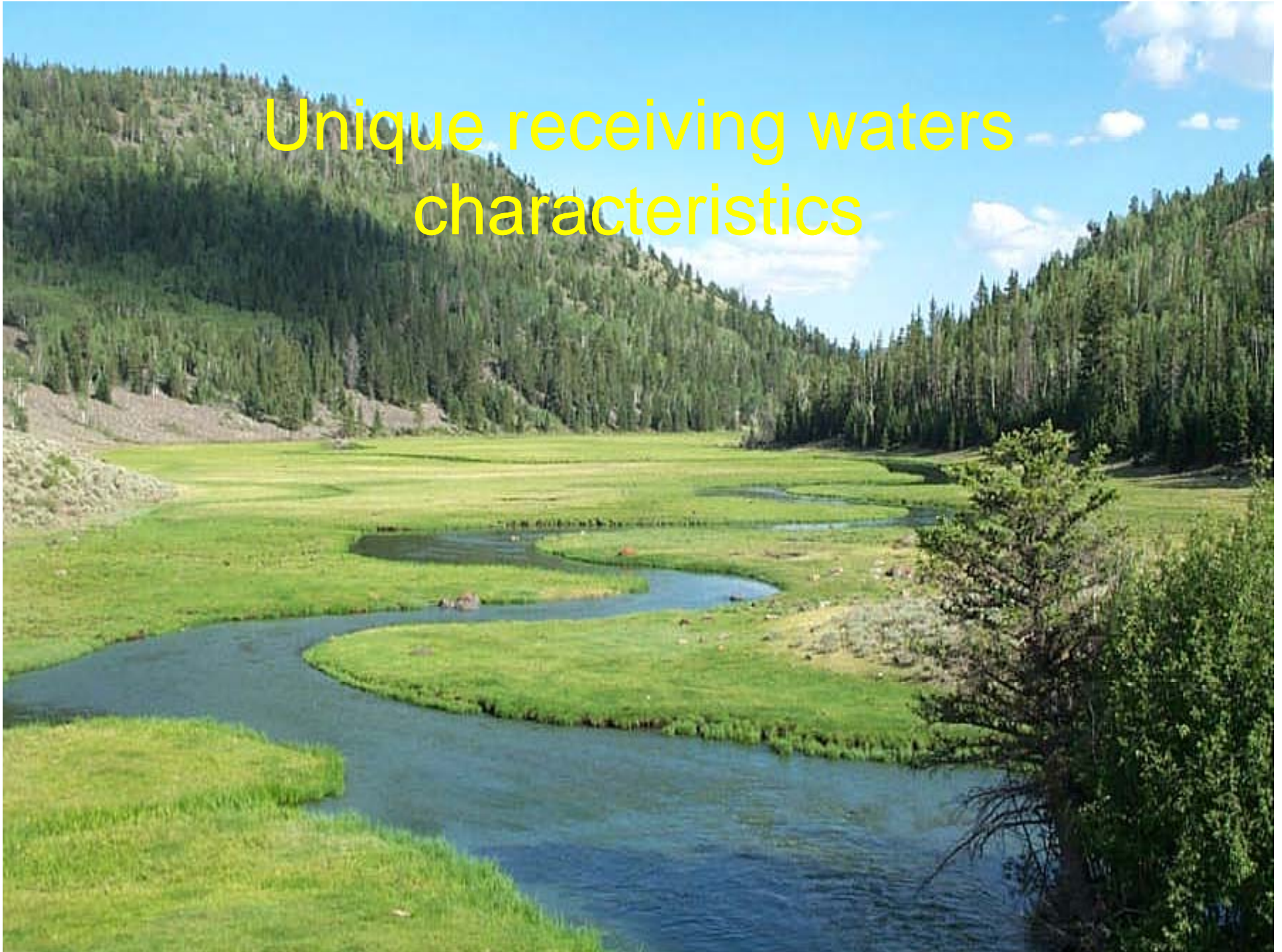
Rural Utah



Nutrient removal challenges



Unique receiving waters characteristics



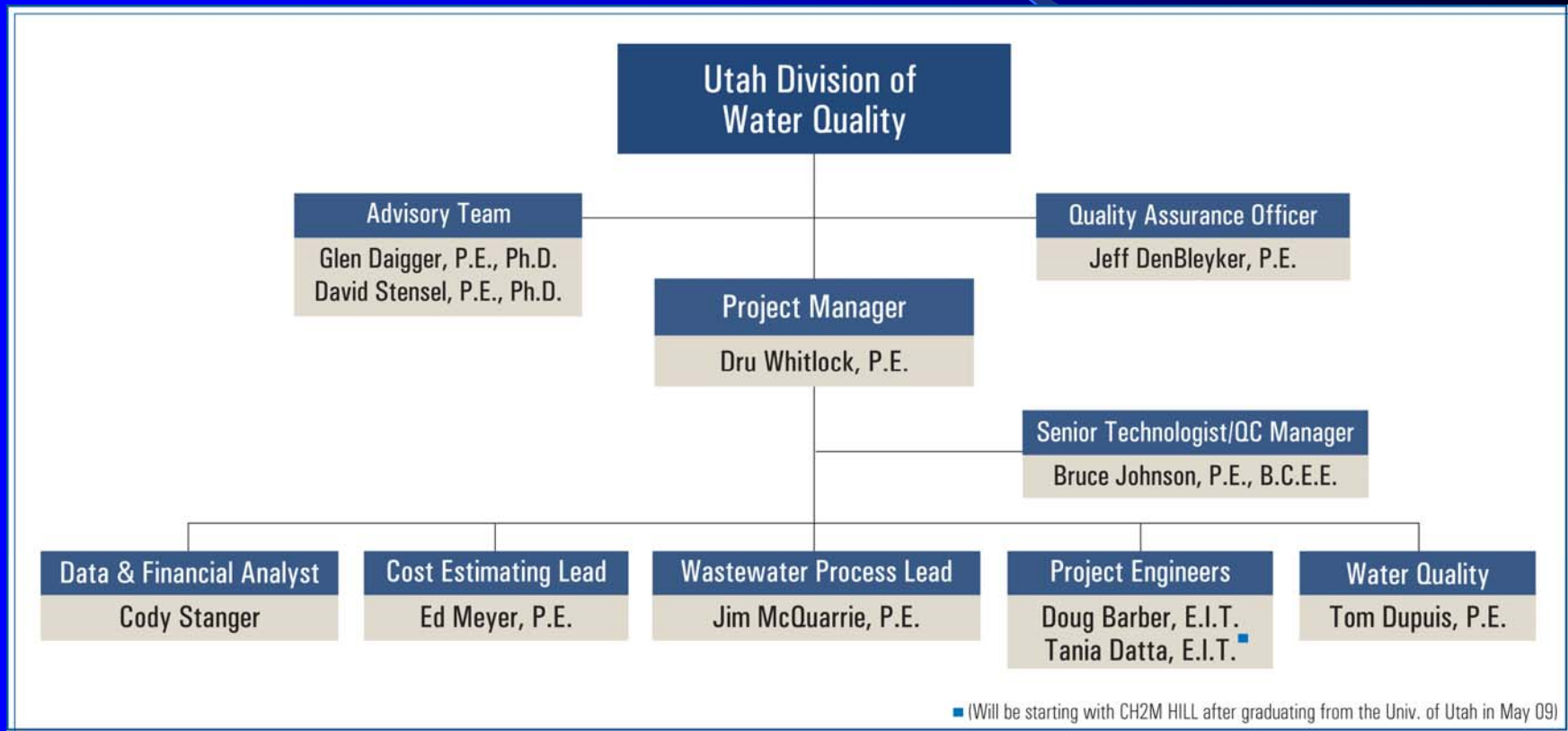
Study Objectives

- Determine the potential economic impacts of state-wide nutrient discharge standards
- Estimate potential environmental benefits of state-wide nutrient discharge standards

Study Group

- All operating Mechanical POTWs in Utah
- Discharging Lagoons –Model system

Project Team



Study Performance Objectives

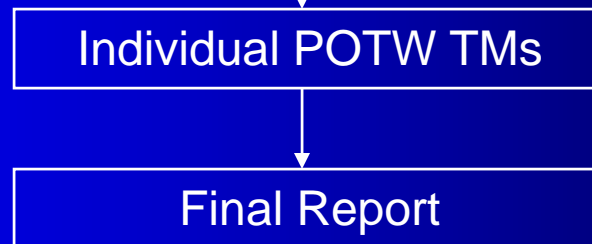
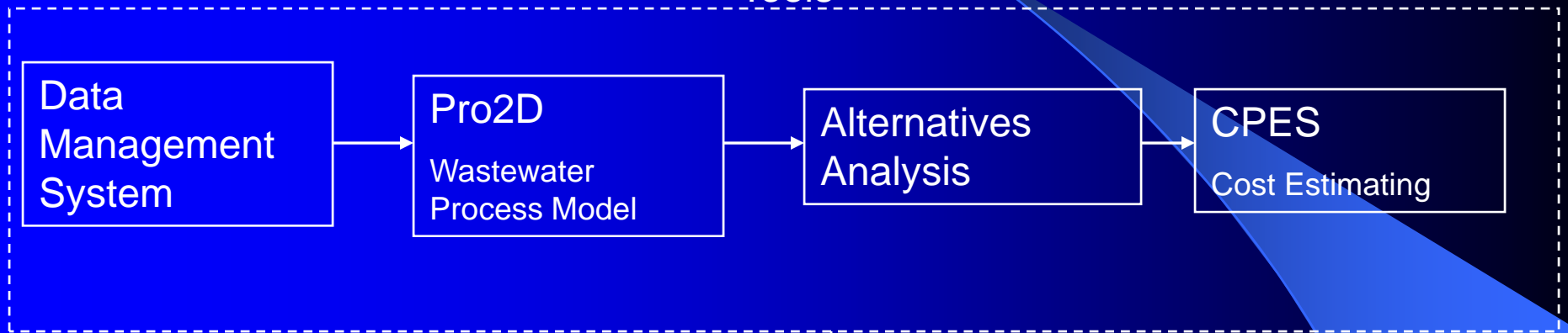
Effluent Nutrient Requirement Scenarios	
Total Phosphorus Only	Total Phosphorus & Nitrogen
1.0 ppm	1.0 ppm & 20 ppm
0.1 ppm	0.1 ppm & 10 ppm

Environmental Benefit Aspects

- Receiving stream nutrient load reductions
- Chemicals use
- Residuals management
- Air emissions
- Energy use

Project Approach

Tools



Project Challenges

- Data collection, gaps and management
- Control of Quality
- Models sensitivity
- Good communications

POTW Involvement / Input

Data acquisition :

- Service area projections
- Treatment performance, incl. supp. WQ analysis
- unit operations
- costs
- Attend Stakeholder conference - June 2009
- Assess strategic improvement alternatives
- Support project quality

Project Milestones

- Data acquisition / analysis: Feb. – April 09
- Alternatives concept design: June – Aug. 09
- Alternatives develop / model: April – May 09
- Cost / Financial Analysis: Aug. – Nov. 09
- POTW Conference: June 09
- Environmental: Sep. – Nov. 2009
- Final report to WQB: Feb. 2010

Upcoming Activities

- Project work / quality plan NOW available
- Data upload request February 2009
- Stakeholder conference July 2009

What can you do now?

- Support the State's data acquisition effort
- Comment on the work plan, quality plan
- Work with team on strategic improvements
- Attend Stakeholder conference
- Contribute ideas and energy to the project team

Thank You!

- Questions?

