



**State of Utah**  
**Nutrient Criteria Implementation**  
**Economic Evaluation Study**  
**Fact Sheet**



The Utah Division of Water Quality (DWQ) is funding a study to quantify the economic benefits and costs of implementing nutrient criteria for surface waters in Utah. Human-caused nutrient inputs of nitrogen and phosphorus to the nation's waters have been identified as significant threats to aquatic life and recreational uses. In response, the US Environmental Protection Agency has called upon States to develop and adopt numeric nutrient criteria. Understanding the costs and benefits associated with the implementation of nutrient criteria is important for informing decisions to increase economic welfare. The use of economic data to inform regulatory decisions requires a comprehensive evaluation of the values that people derive from their direct and indirect uses of Utah's water bodies as well as the value that residents place on preserving and stewarding the state's surface waters (i.e., non-use value).

**Study Objectives and Approach:**

Objective 1 Provide economic benefits of implementing nutrient criteria on recreational demand for Utah waterbodies.

*Approach: Conduct field survey of recreational users and mail survey of Utah households to estimate the economic valuation of Utah's waterbodies.*

Objective 2 Provide comprehensive information on the aggregate benefits and costs of implementing nutrient criteria.

*Approach: Collect and evaluate economic data from sectors affected by nutrient criteria.*

Objective 3 Provide site-specific information on benefits and costs of reducing nutrients.

*Approach: Develop site-specific economic evaluation tool.*

**Economic Cost Categories:**

- 1) Publicly Owned Treatment Works (POTW) upgrades (Separate study completed previously).
- 2) Industrial dischargers water treatment.
- 3) Non-point source and stormwater treatment.
- 4) Total Maximum Daily Load (TMDL) administration and compliance.

**Economic Benefit Categories:**

- 1) Recreation value – fishing, hunting, boating swimming and near water.
- 2) Non-use value.
- 3) Property value.
- 4) Drinking water and industrial intake treatment cost savings.

**Study Application:** DWQ will use the economic evaluations from this study in several ways, including: 1) conveying the net costs of criteria implementation when proposing nutrient criteria revisions to Utah's water quality standards, 2) as outreach information to convey the socioeconomic importance of nutrient criteria to politicians and other affected lawmakers, 3) the prioritization and evaluation of future nutrient reduction projects, and 4) the development of objective rules for evaluating the least degrading "feasible" treatment alternative as required by Utah's antidegradation rules.

**Study Timeline:** December 2010 - June 2012

**Study Participants:** CH2M HILL Inc. is the prime contractor for the study in partnership with the University of Wyoming's Wyoming Survey and Analysis Center, and Professors from Utah State University and Colorado State University. Cooperating state agencies include the Division of Parks and Recreation, Division of Wildlife Resources and Division of Drinking Water.

**Contact:** For more information on this study and nutrient criteria implementation, contact either:

Nicholas von Stackelberg (801-536-4374, [nvonstackelberg@utah.gov](mailto:nvonstackelberg@utah.gov))

Jeff Ostermiller (801-536-4370, [jostermiller@utah.gov](mailto:jostermiller@utah.gov))