

Western Water and Power Solution Bulletin

Research and Development Office — Denver, Colorado

Bulletin No. 70
September 2011

Managing Diverging Science in Reclamation Water Allocation Decisions

A comprehensive guide for tools to manage conflicts over science that impede water allocation decisions

What Is The Problem?

Reclamation managers, engineers, and scientists sometimes become involved in internal or external disagreements over technical data, methods, or findings, which are sufficiently serious to impede a water resource management decision. For instance, two scientists might disagree about how much water an endangered species of fish really requires or how much water yield will grow if tamarisk is removed from a river corridor. These disagreements can sometimes disrupt water deliveries.



Tamarisk on the Colorado River. Scientists dispute how much water yield will increase if the invasive tree were removed from the watershed. Photo courtesy of Dr. Subramania Sritharan of Central State University.

Our aim is to investigate what methods Reclamation has used to resolve disputes over science, and how effective the various methods were in resolving those disputes.

What Is The Solution?

This research examined the tools Reclamation uses to manage conflicting or diverging science to determine:

- What tools have worked best in specific situations?
- What tools have proven ineffective?
- What tool gaps exist?
- What promising, but unused tools could be successfully implemented?

In FY2011, the researchers launched a Reclamation-wide electronic survey to determine how disputes over science are currently managed. The survey asked Reclamation scientists, engineers, and managers what techniques they have used and to what effect. The results are being compiled and will be available at the end of 2011.

Who Can Benefit?

Reclamation managers will be able assess what tools might be of use to them. These would include joint fact-finding among stakeholders and scientists, Blue Ribbon panels, conducting new scientific experiments ("more science"), "science courts," adaptive management processes, and collaborative modeling, among others).

Future Development Plans

From these investigations and follow-up case studies we will put together a manual of tools that are available to water managers to handle disputes over science.

- What lessons have our managers learned as they have used various tools?
- What are the relative strengths and weaknesses of each tool used to manage disputes over science?

Continued research, which will include in depth case studies, are needed to understand these strengths, limitations, and applicability of each dispute resolution approach.

For More Information

Reclamation. 2008. Managing Water Conflict: A Survey of Reclamation Managers and Scientists.

E. Ruell, Burkardt, N., and D.R. Clark. 2010. Resolving Disputes over Science in Natural Resource Agency Decisionmaking. Bureau of Reclamation.

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Collaborators

Reclamation's Research Office, Reclamation's Technical Services Center, and U.S. Geological Survey (USGS) Policy Analysis and Science Assistance Branch