



Highlights of [GAO-05-283](#), a report to congressional requesters

Why GAO Did This Study

Drought conditions along the Oregon and California border since 2000 have made it difficult for the Bureau of Reclamation (Reclamation) to meet Klamath Project irrigation demands and Klamath River flow requirements for threatened salmon. To augment river flows and avoid jeopardizing the salmon's existence, Reclamation established a multiyear water bank as part of its Klamath Project operations for 2002 through 2011. Water banks facilitate the transfer of water entitlements between users.

This report addresses (1) how Reclamation operated the water bank and its cost from 2002 through 2004, (2) whether Reclamation met its annual water bank obligations each year, (3) the water bank's impact on water availability and use in the Klamath River Basin, and (4) alternative approaches for achieving the water bank's objectives.

What GAO Recommends

GAO recommends that Reclamation improve the information provided to stakeholders by systematically providing public information on management decisions and the water bank's status.

The Departments of Commerce and the Interior reviewed a draft of this report and generally agreed with the findings; Reclamation agreed with the recommendation.

www.gao.gov/cgi-bin/getrpt?GAO-05-283.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu K. Mittal at (202) 512-3841 or mittala@gao.gov.

KLAMATH RIVER BASIN

Reclamation Met Its Water Bank Obligations, but Information Provided to Water Bank Stakeholders Could Be Improved

What GAO Found

Reclamation has changed how it operates the Klamath Project water bank, as it has gained more experience, to help it meet its growing obligations and mitigate costs. For example, Reclamation initially obtained most of the water for the water bank by contracting with irrigators to either forego irrigation altogether (crop idling), or use only well water (groundwater substitution). It later added the option to pump well water into the irrigation canals for others to use (groundwater pumping). For the period 2002 through 2004, Reclamation's water bank expenditures totaled over \$12 million, and the cumulative cost could exceed \$65 million through 2011.

GAO's analysis of water bank contracts and river flow records found that Reclamation met its water bank obligations by acquiring and delivering the required amount of water for 2002 through 2004. However, Reclamation has not provided stakeholders with systematic and clear information concerning the water bank's management and status and its decision to use river flow data that are not publicly available limited stakeholders' ability to monitor water bank activities. This has led to confusion and doubt among stakeholders on whether Reclamation met its water bank obligations.

The water bank appears to have increased the availability of water to enhance river flows by reducing the amount of water diverted for irrigation, but the actual impacts are difficult to quantify because Reclamation lacks flow measurement equipment and monitoring data for the Klamath Project. Reviews by external experts of the impacts of the 2002 and 2003 crop idling contracts indicate that significantly less water may have been obtained from these contracts than Reclamation estimated. Given the uncertainty surrounding how much water can be obtained from crop idling, in 2004 Reclamation officials decided to rely primarily upon metered groundwater wells for the water bank. However, Reclamation has since learned that groundwater aquifers under the Klamath Project, already stressed by drought conditions, have shown significant declines in water levels and are refilling at a slower than normal rate in recent years. As a result, Reclamation is considering lessening its reliance on groundwater for the 2005 water bank but is uncertain if it can meet its water bank obligations, particularly for spring flows, while increasing its reliance on crop idling.

Although several alternative approaches for achieving the water bank's objectives have been identified by Reclamation and other stakeholders, limited information is available regarding their feasibility or costs. Some alternatives to the water bank include permanently retiring Klamath Project land from irrigation or adding new short-term or long-term storage. Each alternative has been considered to varying degrees, but significant analysis is still needed on most alternatives before any implementation decisions can be made. Meanwhile, Reclamation and the National Marine Fisheries Service have an ongoing dialogue regarding the water bank and will likely reconult on Klamath Project operations, including the water bank, in 2006.