

Economic and Conservation Tradeoffs of Regulatory Vs. Incentive-Based Water Policy in the Pacific Northwest

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“Economic and Conservation Tradeoffs of Regulatory Vs. Incentive-Based Water Policy in the Pacific Northwest”

by Glenn D. Schaible

For more information contact
Glenn D. Schaible
schaible@ers.usda.gov
<http://www.ers.usda.gov>

Water quality, endangered salmon species, and Native American fishing rights have significantly heightened the competition for Columbia and Snake River Basin water resources. A solution to this regional resource conflict is expected to involve

a reallocation of water resources from agriculture. This analysis examines both onfarm water conservation and agricultural economic tradeoffs across five broad regulatory and conservation-incentive water policy perspectives for the Pacific Northwest. Conservation-incentive policy focuses on (1) enhanced onfarm irrigation efficiency assuming the adoption of water-conserving irrigation technology and water-management practices, and/or (2) increased onfarm purchased water prices for publicly-supplied, Bureau of Reclamation (BoR) water. Regulatory policy focuses on reductions in publicly supplied (BoR) water to agriculture. Results demonstrate that conservation-incentive water policy, when integrated within balanced policy reform, can produce upwards of 1.7 million acre feet of onfarm conserved water for the region, while also significantly increasing economic returns to farmers. Producer willingness-to-accept water policy change is lowest for regulatory policy (\$4-\$18 per acre-foot), but highest for conservation-incentive policy that increases both irrigation efficiency and crop productivity (\$67-\$208 per acre-foot). Conservation-incentive policy also enhances decisionmaker flexibility in meeting multiple regional policy goals (i.e., water for endangered aquatic species, water quality, Native American treaty obligations, and sustainable rural agricultural economies).

