IWRM Action Hub

RESOURCE

An Estimate of the Shadow Price of Water in the Southern Ogallala Aquifer

|

Author(s)
Williams, Ryan Al-Hmoud, Rashid Segarra, Eduardo Mitchell, Donna

Description / Abstract

In this paper, we attempt to quantify the shadow price of an additional inch of groundwater resource left in situ for the Southern Ogallala Aquifer. Previous authors have shown the degree to which the optimal resource extraction path may diverge from the competitive extraction path based upon varying assumptions. We utilize high-quality data over an unconfined groundwater resource to evaluate the validity of these results. We find that the size of the existing groundwater resource is sufficiently small to result in a divergence between the competitive and socially optimal solutions. We are also able to confirm that the model responds to changes in the parameters in a manner consistent with previous research. Finally, we arrive at a marginal user cost for an additional acre-inch of water which is relatively low, but reasonable given uncertainty about future technological improvements.

Publication year
2017

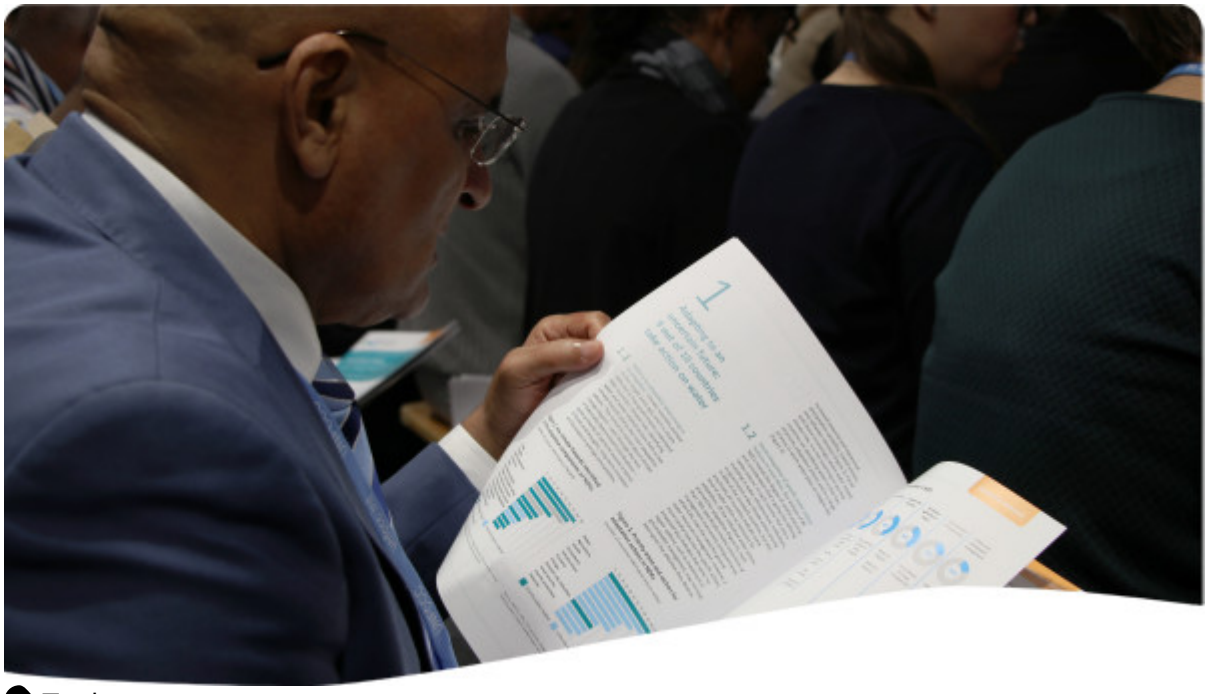
Country
United States of America (the)

Region
Americas

Keywords
Groundwater Management shadow price

Thematic Tagging
Private Sector
Language English
View resource

Related IWRM Tools



Tool

Economic Value of Water

D1.02

Source URL: https://iwrmactionhub.org/resource/estimate-shadow-price-water-southern-ogallala-aquifer