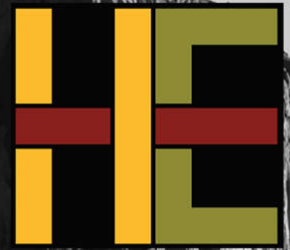


ON THE OTHER HAND

THE NEWSLETTER OF HARVEY ECONOMICS



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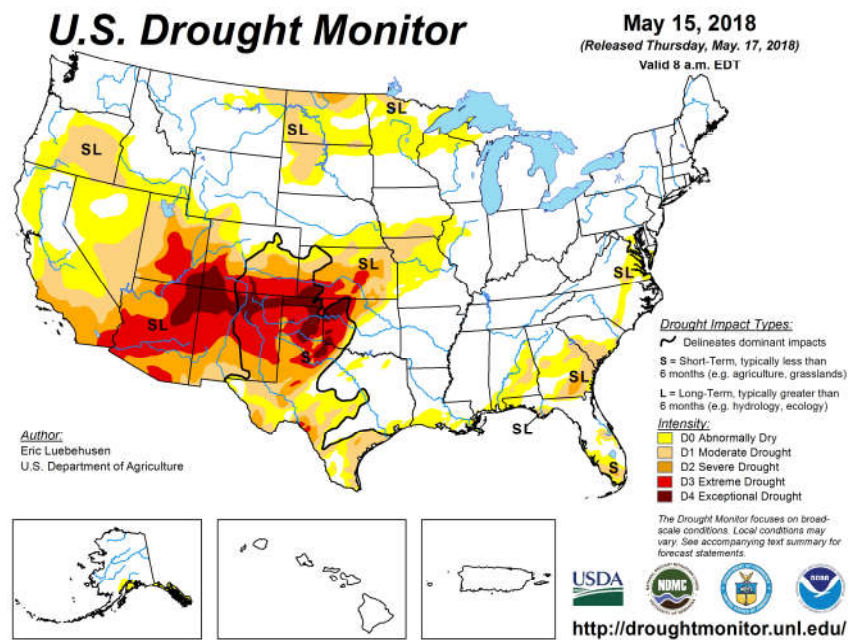
MAY 2018

The Economic Side of Groundwater Mining in the Western U.S.

Groundwater isn't a problem until you run out. The West and even places in the East have relied on pumping water out of the ground to supplement river, lake and reservoir resources for decades. Surface water droughts over the past twenty years have resulted in less percolation or "feeding" of the groundwater aquifers in conjunction with more groundwater pumping. An unsustainable combination, for sure. Water users, water providers and policy makers are grappling with this problem and with each other over solutions. We hear a growing chorus around the country: "We are running out of groundwater"!

So far, the response seems defined by the local, regional and state reaction where these shortages have occurred. In many areas, groundwater is less regulated and even less understood than surface water. Regulators and water utilities have sometimes imposed limits on use through regulation or jacked prices or both.

Harvey Economics sees an economic framework offering a path forward. First, the economic and financial impacts of unabated groundwater mining must be understood by water users so that the downside of ignoring the problem becomes crystal clear. Second, the possibilities and costs of engineering solutions, such as new reservoirs, trans-basin diversions, increased recharge etc. should be determined. Third, opportunities for using less water, i.e. conservation, price, limited use, etc., by each water user group need to be identified and monetized.



After clarifying the viability of engineering or non-engineering options, the costs and benefits of each option can be explored. Economic benefits of water use include direct financial or other benefits, plus the indirect or community benefits of activities supported by various water uses. Costs go beyond bricks and mortar, such as forsaken economic activity. From a basin-wide perspective, the optimal economic approach can be discovered through comparative benefit-cost analysis.

The net benefits step only answers the question of what can be done. Concepts such as avoided costs of shortage, net returns and ability to pay must factor into a plan for sharing the burden of a groundwater mining solution. The tough issue of who should bear the burden of restoring the aquifer should not be determined by economics alone, since existing water rights, legal, regulatory and policy guidelines should be considered. Scenarios of equitable cost allocation should be pursued. If the parties adopt these principles as a shared goal, implementation of a sustainable plan is achievable.

HARVEY ECONOMICS IN ACTION

As part of our work for the Douglas County Water Resource Authority, HE estimated the future water demand and supply for a proposed regional water system for portions of unincorporated Douglas County, CO. In addition to population and water demand projections. HE also examined the financial impact of reduced access to groundwater and the economic benefit of its replacement by a sustainable surface-supplied regional system. We also conducted a financial feasibility study to determine the beneficiaries ability to pay for the proposed system.

EXTENSIVE EXPERIENCE ACROSS MANY INDUSTRIES

Our client list is diverse, covering a range of public and private concerns, government agencies and corporations. We work in many areas including Water, Natural and Environmental Resource Economics, Tourism and Recreation, Energy, Minerals, Litigation Support, NEPA, and Agriculture. Regardless of the endeavor, the types of questions that guide our team are fundamental.

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