Utah is one of the driest states in the country, yet it has one of the highest rates of water consumption. The Institute of Political Economy (IPE) at Utah State University examined the institutional, economic, and political barriers that prevent water from flowing to its most highly valued use in Utah. We found that Utah has cost-effective options to reduce water consumption to support Utah’s growing population that do not require expensive and potentially environmentally-degrading water development projects. We present market-oriented solutions for reforming water policies in Utah that would allocate water more efficiently in the state.

KEY FINDINGS

INSTITUTIONAL PROBLEMS & MARKET SOLUTIONS

REFORM OR REMOVE THE DOCTRINE OF BENEFICIAL USE: REQUIRING FARMERS TO USE THEIR WATER OR LOSE THEIR WATER RIGHTS DISCOURAGES WATER CONSERVATION.

Like many western states, Utah adopted a system of prior appropriation that gave water rights to whomever was the first to divert water and put it to “beneficial use.” Today, the beneficial use requirement is problematic because the state engineer and courts arbitrarily determine what constitutes a beneficial use of water. Beneficial use also has a “use it or lose it” restriction. If water rights owners do not use their full share of water, they risk losing their rights without compensation. This restriction is particularly frustrating for agricultural water users, since water supply and necessity varies from year to year. Without this restriction, water users would have the incentive and the opportunity to conserve water because they would be able to sell the water rights they no longer need.

REFORM THE BUREAUCRATIC PROCESS OF WATER TRADING: WHEN WATER MARKETS ARE ALLOWED TO FUNCTION, WATER CAN FLOW TO ITS MOST HIGHLY VALUED USE.

Water is not traded very often in Utah compared to other western states. Our research found that Utah could reduce some of the barriers to trading water rights in Utah to allow water to be traded more easily. The process of trading water in Utah is hampered by a complex system of regulations and is subject to a high level of regulatory scrutiny. Although the process of trading water rights typically takes anywhere from 90 to 180 days, political pressures can extend the length of the process to several years.
ECONOMIC PROBLEMS & MARKET SOLUTIONS

PAY FOR WATER DELIVERANCE THROUGH USER FEES, NOT PROPERTY TAXES OR FEDERAL SUBSIDIES: USER FEES HELP CONNECT THE COST OF WATER WITH ITS CONSUMPTION, ENCOURAGING CONSERVATION.

In Utah, water is paid for by a combination of user fees and property taxes. Property taxes and federal subsidies hide the cost of each gallon of water used because there is a large difference between the cost of delivering water and the price paid. Federal subsidies alone distort the price so that agricultural water users pay only $13 per acre-foot of water in Utah on average. In reality, however, federal water projects like the Central Utah Project cost about $4,000 per acre-foot for delivery. Property taxes hide the full cost of water by lowering the amount water users pay per gallon of water used.

Because the price of water is lower than its cost, users are not encouraged to conserve when water becomes scarce. If consumers were charged for water through user fees rather than property taxes, prices could fluctuate to reflect scarcity and users would be encouraged to conserve.

Even this combination of user fees, property taxes, and federal subsidies does not actually reflect the full opportunity costs of using water. The price charged for municipal water reflects the cost of water delivery systems, often not taking into account the actual scarcity value of water. If water were traded more regularly, the price paid could more closely reflect how much people actually value the resource rather than just reflecting the price of water infrastructure.

USE MORE EFFECTIVE TIERED PRICING SYSTEMS. TIERED PRICING SYSTEMS ENCOURAGE CONSERVATION BY INCREASING RATES AS WATER CONSUMPTION GOES UP.

Utah water conservancy districts set water rates, and could encourage water conservation by adopting more aggressive tiered pricing systems that charge heavy water users a higher rate than users who consume less. This would keep water inexpensive for basic human use, but encourage conservation by increasing prices once consumers go over a certain threshold of gallons per month. The Utah Legislature passed a law in 2016 requiring tiered pricing systems, but many tiered pricing systems in Utah do not adequately encourage conservation because they do not increase the price of water by a meaningful amount. Cities with more effective tiered pricing systems charge substantially more for higher uses, or put a user into a higher payment tier at a lower threshold of consumption.

POLITICAL PROBLEMS & MARKET SOLUTIONS

EXPLORE LESS COSTLY ALTERNATIVES BEFORE BUILDING LARGE, EXPENSIVE PROJECTS: WATER IS OFTEN MANAGED ACCORDING TO POLITICAL CONSIDERATIONS, RATHER THAN ECONOMIC ONES.

Political demand for large water projects that secure larger budgets affects water management more often than the actual value and scarcity of the resource. The Utah Division of Water Resources systematically overestimates the amount of water needed in the future while underestimating the amount that will be available. Cities may be overstating their water use and needs out of fear that the state engineer will take away unused water allocations. The Division of Water Resources also overlooks how urban development transfers agricultural water to municipal use. Because agriculture uses much more water than municipal and industrial uses, developing agricultural land for commercial use increases the amount of water that is available. The resulting misperception that there will not be enough water to meet demand has been a key driver in the proposals for the Bear River Project and Lake Powell Pipeline, two major water infrastructure projects that are expensive and unnecessary. These kinds of projects will cost taxpayers billions of dollars that can be avoided by enacting better water management policies.

At Strata, our mission is to help people make informed decisions about issues that impact the freedom to live their lives. We work to achieve more prosperous and free societies by affecting a change in the climate of ideas. We do this by conducting robust research on energy and environmental issues, informing policy makers, citizens and civic leaders, and by mentoring high-achieving students to become future decision makers. Strata is located in Logan, Utah. We draw from the collective academic strength and ideas from the faculty and students at Utah State University and a strong network of academics and professionals throughout the world.

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