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2017

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PAID TO PUMP

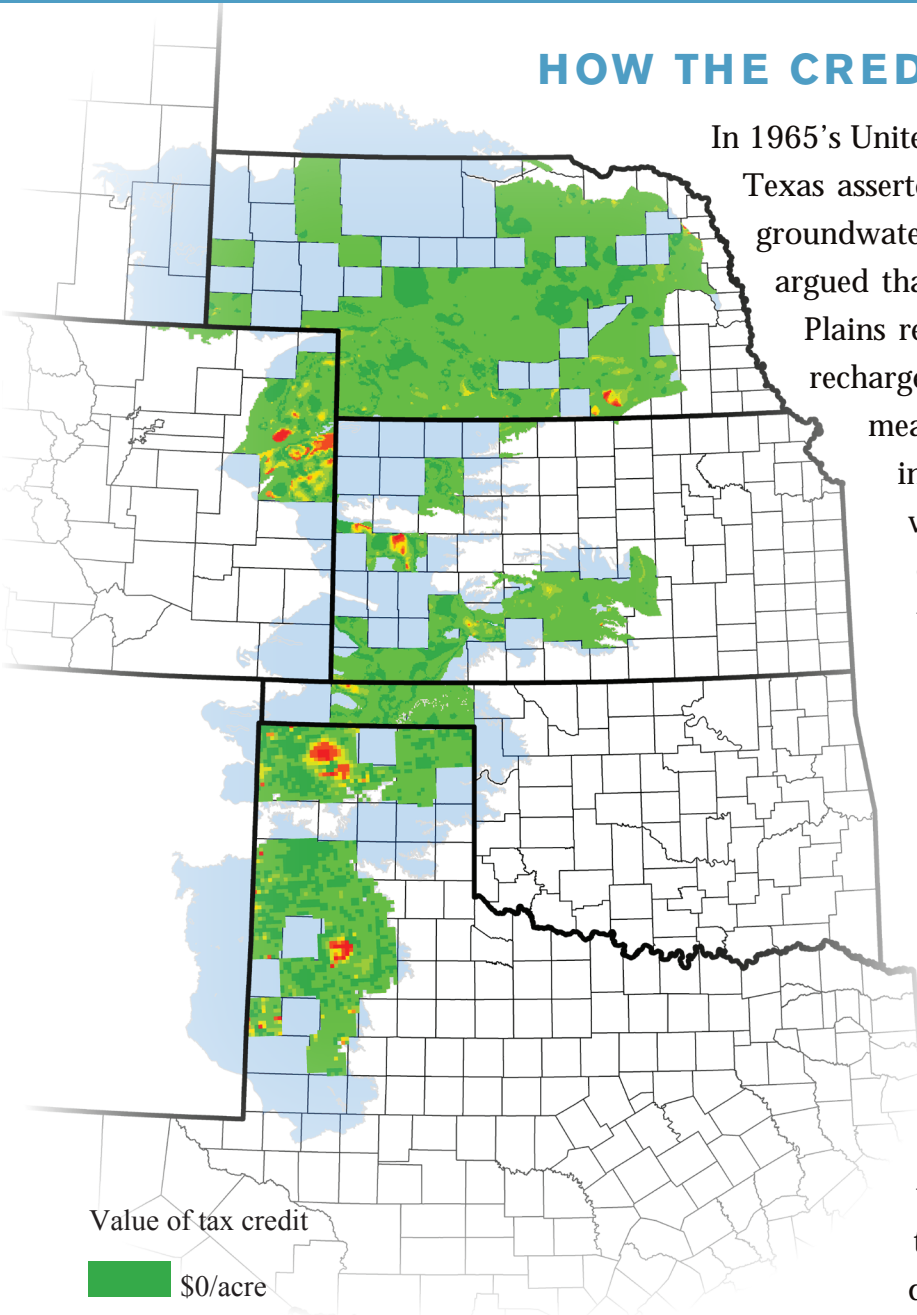
How a tax credit could discourage conservation of the High Plains Aquifer

HOW THE CREDIT CAME TO BE




In 1965's *United States v. Shurbet* case, an irrigator from Texas asserted his claim for a depletion tax deduction for groundwater pumped from the High Plains Aquifer. He argued that the unique conditions of the southern High Plains region - a plateau where the shallow aquifer is recharged only through precipitation at a slow rate - meant the groundwater resource would be depleted in time. The state argued that groundwater was not fundamentally an exhaustible natural deposit, but the Supreme Court concluded the tax deduction was appropriate given the "peculiar" conditions in the area. It was stated the decision was not meant to establish a precedent regarding cost depletion of groundwater.

The findings of the *Shurbet* case were intended to be limited to the southern High Plains region. However, in a 1980 lawsuit against the IRS, the Gigot brothers of Kansas sought to expand the deduction to allow depletion of the aquifer beneath their 30,000 acre farm in Kansas. The case was settled in the district court with a ruling allowing the brothers' deductions to continue, thereby extending the *Shurbet* decision to include all landowners extracting from the approximately 174,000 square miles of

land overlying the High Plains Aquifer. Currently, the estimated value of the credit is highest in parts of northern Texas, eastern Colorado, western Kansas, and south central Nebraska.



Value of tax credit

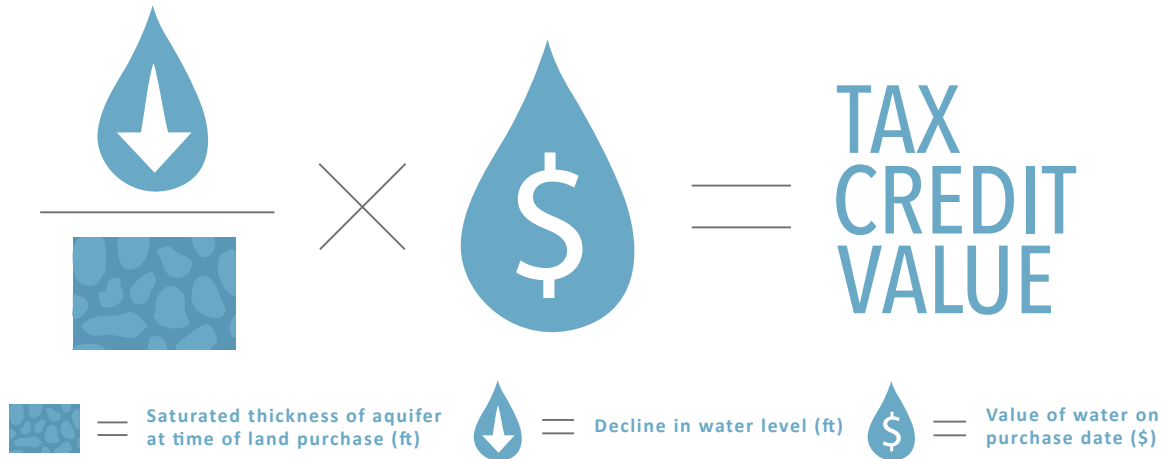
-  \$0/acre
-  \$500/acre
-  \$1000+/acre

Assumes 2009 land purchase with a credit taken in 2013.

Data sources: USDA, USGS.

HOW THE CREDIT WORKS

The tax credit aims to give money back to irrigators and other users for the depreciation of their asset, which in this case is the High Plains Aquifer. The tax credit value per acre can be found as follows:



The value of water is derived differently depending on the state and county, due to differences in property rights and the price of land. For example, Carson County in Texas valued irrigated land in 2016 at \$3,173 per acre, with 70% of that value being allocated to water. This would mean the value of water on one acre of land in this particular county would be just over \$2,220.

If a well in this county had an original saturated thickness of 595 feet and the water level in the well had decreased by 27 feet when the landowner took the tax credit, their calculation would look like this:

$$\left(\frac{27\text{ft}}{595\text{ft}} \right) \times \$2,220/\text{acre} = \$101/\text{acre}$$

There are several water districts in Texas providing a service to measure the decline in the water table, which allows the water user to calculate their own percent depletion. Well owners in Texas are not required to meter wells throughout the year; the district will just compare the current saturated thickness to that of last year. The same general equation for calculating depletion does not change by state; however, water values, saturated thickness and rates of aquifer depletion vary by a large amount.

1862

The Homestead Act is signed, incentivizes migration to the Plains

1890s

Aquifer discovered but not seen as agriculturally important

1911

First motor-driven irrigation well is drilled in Texas, a major development in a semiarid region

1949

Center pivot technology is introduced when farmer Frank Zybach develops the first "self-propelled sprinkling apparatus"

1950

Acres under irrigation increased 143 percent since 1940

1964

United States v. Shurbet decides irrigators using groundwater in areas of Texas and New Mexico are entitled to a cost depletion tax credit

1974

The USGS estimates groundwater withdrawals increased fivefold from 1949

1980

A federal court settlement enables farmers in eight states above the aquifer to claim the cost depletion tax credit

Present

Water levels in the southern High Plains of Texas have fallen more than 100 feet in places, "leaving many farmers without any water at all," according to the USGS

POSSIBLE IMPLICATIONS

It's difficult to determine how widely the tax credit is used, or the actual impact on the High Plains Aquifer, because the federal tax data are unavailable. A number of people have commented on the tax credit's possible effects. Edgar S. Bagley, a professor of economics at Kansas State University, wrote in a 1972 article (before the credit was extended significantly in 1980), "Certainly, the depletion allowance has not discouraged depletion, although it is doubtful it has thus far accelerated it significantly." He went on to write, "With the depletion allowance thus far restricted to one relatively small segment of the irrigated land in the United States, its total effect to date in accelerating depletion surely has been minimal."

Some groundwater managers are aware of the tax credit's possible implications. The South Plains Underground Water Conservation District in Texas provides information on how to apply for the depletion deduction on its website but notes, "When qualified landowners receive this tax benefit, they are also reminded of the ever present need for continued conservation."

Katherine Wilkins-Wells, a former Kansas groundwater district manager, wrote on her blog in 2014, "I often wonder if the rulings have had any impact on groundwater use or conservation in the Ogallala [High

Plains Aquifer]... Personally I don't think it is used all that much in NW Kansas - where the cost in water has always been harder to establish, and the declines less significant. But where this is not true, I can see tax benefits to depleting the groundwater on schedule."

10—Fort Scott, (Kan.), Tribune—Wednesday, October 1, 1980

Irrigators win tax suit, earn major deductions

WICHITA, Kan. (AP) — A federal court settlement Tuesday cleared the way for irrigators in western Kansas and seven other states to claim millions of dollars in income tax deductions for pumping irreplaceable water onto their crops.

The settlement was reached by U.S. Justice Department attorneys and lawyers for three western Kansas irrigators who filed the case in 1978 in U.S. District Court in Wichita.

The agreement specifically covers water taken from the Ogallala Aquifer, an underground deposit of water that stretches from southern South Dakota into Texas. Scientists have said that extensive irrigation is draining off the water supply.

The settlement requires the Justice Department to seek a formal ruling from the Internal Revenue Service allowing irrigators in Kansas, Nebraska, Oklahoma, Texas, New Mexico, Colorado, Wyoming and South Dakota to claim the income tax deductions.

Attorneys representing the irrigators said the settlement could lead to more than \$50 million in annual income tax deductions for irrigators in Kansas alone.

They compared it to depletion allowances allowed for other declining resources such as oil.

Pat Regan and Mike Doering, the

Wichita attorneys representing the Garden City-area Gigot family that filed the suit, said that from a tax point of view, the settlement is one of the most significant tax decisions ever to affect farmers in the Midwest.

"We could easily be talking about more than \$1 billion in potential depletion deductions over the life of the aquifer, just in Kansas," Regan said. He added that the figures become "mindboggling" when totaled for all eight states.

Justice Department lawyers acknowledged the settlement but would not comment on how much the tax break would cost the government.

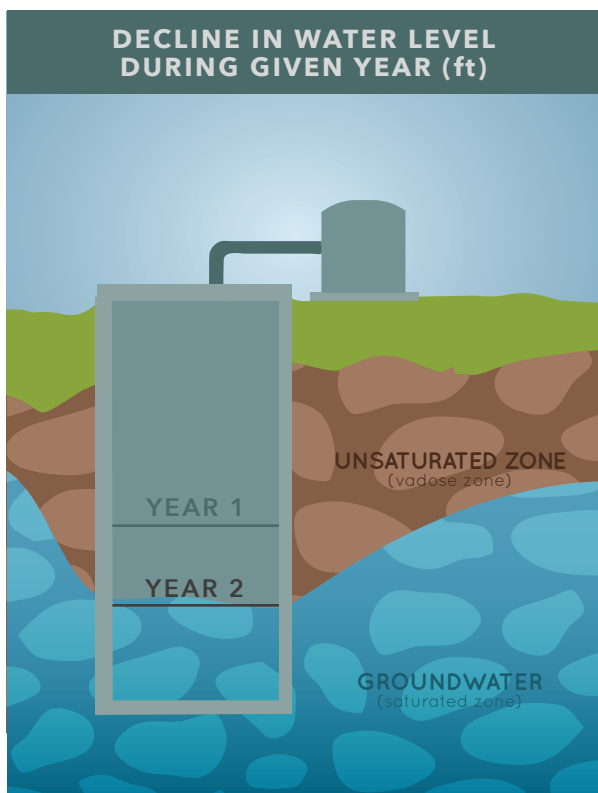
Regan said that in 1981 deduction claims could be staggering because landowners would be able to claim deductions for the past three years.

The suit originally was filed Jan. 23, 1978 by three Garden City brothers, Dean, Gerry and Terry Gigot. The suit sought to recover more than \$30,000 plus interest from the federal government for income taxes erroneously assessed and collected between 1973 and 1976.

The Gigots said the IRS erroneously denied their deductions for depletion of the underground water deposits that feed their 250 wells on a 30,000-acre irrigated corn and cattle-feeding farm between Deerfield and Pierceville.

WHAT CAN BE DONE INSTEAD

Several federal and state-level programs exist to encourage conservation in agriculture. For example, the federal government's Environmental Quality Incentives Program (EQIP) provides financial and innovation assistance to help farmers plan and



implement conservation practices. A subprogram of EQIP known as the Agricultural Water Enhancement Program (AWEP) allows agricultural land trusts and irrigation associations to submit conservation funding proposals for particular watersheds. Some water districts pay farmers based on the amount of water that recharges on their property, either via best management practices or by recharging stormwater. The principle of these programs could be applied to the High Plains Aquifer tax deduction to create a policy that would reward farmers for conserving groundwater rather than depleting it. In such a policy, farmers could claim a tax credit for recharging a depleted aquifer, bringing private and public

resource management goals into line. Farmers would continue to receive financial benefits but would help to ensure that the water source on which they rely would be available to future generations.

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