



Dear Chairman Keffer and Members of the Natural Resources Committee:

My name is Judith McGeary, and I am the founder and Executive Director of the Farm and Ranch Freedom Alliance (FARFA). FARFA is a Texas-based nonprofit that advocates for common sense policies for local, diversified agricultural systems.

Water transfers can play an important role in allocating water in the short-term, particularly at the local and regional levels. But there are several fundamental challenges that must be considered:

- 1) Protecting individuals' property rights;
- 2) Ensuring the survival of socially valuable businesses; and
- 3) Providing for future needs.

Protecting individual property rights

Marketing water in Texas is problematic because Texas groundwater law essentially allows the uncompensated taking of a landowners' groundwater.

Under the rule of capture, a landowner's rights to use the water under his or her land can be destroyed by over pumping of the aquifer. This is true even where there is a groundwater district, if the district does not prevent depletion. A private developer or a city can buy water rights from a handful of property owners, which then allows them to pump water that is pulled from underneath the land of hundreds or thousands of people.

This is not a new problem: the rule of capture has been the law for over a century. But if you promote increased marketing of water, creating financial incentives for people to sell their water, you will significantly magnify the problem. Before you can legitimately promote increased marketing of water, you must first establish protections against the draining of water from under private landowners' properties.

Marketing surface water is less problematic from a property rights perspective, except to the extent it involves the creation of new reservoirs. The use of eminent domain to take private property to build new reservoirs is **not** a market solution. Land is not a fungible commodity, and its taking cannot be fully compensated with money because every parcel is unique. Permanently flooding prime farmland also imposes a cost on society by destroying a valuable natural resource that is becoming increasingly scarce due to urban sprawl.

Ensuring the survival of socially valuable businesses

If individuals' property rights are properly protected, water markets can play a valuable role in allocating water under certain conditions. First, however, we must recognize the fundamental

nature of markets: Markets value what an individual is willing and able to pay. Markets do **not** necessarily reflect society's values or important societal interests.

For example, it is predictable that some people will be willing and able to pay to keep their lawns green at prices that farmers simply cannot pay. But do we want to see more farmland lost in order to keep lawns green? Is having more golf courses worth being reliant on food from China and South America?

Being able to feed our own communities is vital to our security. **The value to every Texan of having Texas farms raising food is not reflected in our farms' ability to pay increased water costs.** The markets need to be structured to ensure that high-value, low-profit businesses, such as farming, are not priced out of the market.

The combination of the rule of capture and the failure to address social values has a disproportionate impact on rural communities. Farmers who take a long-term perspective and do not wish to sell their water rights have neither the legal nor financial ability to protect their resource base; the decision by a handful of people in their area can destroy the long-term viability of the aquifer and ultimately the farms and ranches in the entire region. Since a significant portion of the economic activity in rural areas is due to agriculture, this impacts the entire community.

The impact is irreversible: it will not be possible to expand or even maintain these communities if there is no water available. All legislators, rural and urban, need to respect communities' interests in maintaining their economic viability, both now and into the future.

Providing for future needs

Water is a basic necessity for human life and for a wide range of economic activity. We cannot assume that some solution will appear in 50 or 100 years to provide the water that is needed for our children and grandchildren to survive and thrive. It is our moral and ethical duty to ensure that this basic necessity is available for the generations to come.

This poses two challenges in talking about water markets.

First, water transfers often disguise unsustainable water usage practices, delaying necessary conservation measures.

This does not avoid the problem; it merely makes the ultimate reckoning more painful. The more water we use now, the less water is available for the even larger population that will come after us.

Consider an individual aquifer. If the current population is already using water from that aquifer faster than it recharges, we're reducing the basic resource base. That means that there will be less water in the future to supply a larger population, and severe conservation and cutback measures will have to be taken. In contrast, **moderate** conservation measures taken **now**, so that the resource base remains stable, means that there will be a reasonable amount of water to supply that future larger population.

This simple fact – conserve now or face even harsher restrictions later – does not change simply because we pool all the water in the state into one system.

Some people claim that massive water transfers are needed to provide for the millions of people expected to move to Texas in the coming decades. However, it is unlikely that many people will want to move to this State if emergency-level restrictions must constantly be enforced due to our failure to address conservation now.

Second, markets consistently undervalue future resources and benefits.

Market values are inherently **present** values. In considering the future, investors rely on the concept of discounting to estimate the “net present value” of expected future costs and returns.¹ This is essentially the reverse of the familiar concept of compound interest.

With a compound interest rate of 7% (based on typical interest rates over the last several decades), an investment will double in value over a period of approximately ten years. This means that a two-dollar payoff ten years from now is worth only one dollar today. “Economic self-interest places significant values on costs and returns expected within a decade because at any point in time most investors expect to live at least that long. ... In reality, effective economic planning horizons for businesses rarely span more than a decade.”²

Now consider what this means over a longer time period. A \$1,000 payoff eighty years from now – one person’s lifetime – is worth only about \$3 today. The effect is even more dramatic over a multi-generational time period; the discounted net present value of a \$1 **million** payoff 200 years from now is only \$1.34.

In other words, based on market principles, it’s reasonable for someone to pay \$1.34 now to use, and even waste, water that will be worth \$1,000,000.00 to our great grandchildren. This makes economic sense because \$1.34 invested at a compound interest rate of 7% would be worth \$1 million in 200 years from now. **This is simply the way the economy values things: What is something in the future worth “today” – not what it will be worth in the future.**

Is this really a moral or ethical way to value our children and their children’s children?

Attached is a chart depicting this reality.

¹ Dr. John Ikerd, unpublished manuscript (2016), referencing Karl E. Chase and Ray C. Fair, *Principles of Economics* (Englewood Cliffs, N.J.; Prentice-Hall, Inc., Second edition, 1992), 323-326; Milton Friedman, *Free to Choose*, (Chicago: Aldine Publishing Company, 1962). Dr. John Ikerd holds BS, MS and PhD degrees in Agricultural Economics from the University of Missouri. He worked in Extension Agricultural Economics positions at North Carolina State University and Oklahoma State University, and was Head of Extension Agricultural Economics, University of Georgia. Dr. Ikerd returned to the University of Missouri in 1989 under a cooperative agreement with the USDA, to provide state and national leadership for research and education programs related to sustainable agriculture. From 1989 to 2000, in addition to working on several National Sustainable Agriculture Projects with USDA, Dr. Ikerd authored book chapters, journal articles, magazine and trade publications, and conference proceedings on various aspects of the sustainable agriculture movement—farm size, systems thinking, profitability, policy, socio-economic considerations and more—even giving congressional testimony in 1989 and 1992. Dr. Ikerd retired as Professor Emeritus from the University of Missouri in 2000.

² Dr. John Ikerd, unpublished manuscript (2016).

Recommendations

1. **Prioritize conservation statewide.** Every city and every industry needs to make conservation the top priority. The Legislature should remove barriers to conservation, including barring homeowners' associations from restricting water conservation measures such as xeriscaping.

The Legislature should also take steps to affirmatively promote conservation measures such as rainwater harvesting, graywater systems, and other efficiency measures. A tiered water pricing structure may be useful, so long as it recognizes social values such as the need for water for basic necessities and for raising food.

2. **Protect individuals' property rights in groundwater.** The Legislature should consider alternatives to the rule of capture. At a minimum, if the rule of capture remains in place, landowners must be protected against the draining of water from beneath their land. Landowners should not be allowed to sell water if those sales result in the lowering of the aquifer levels.

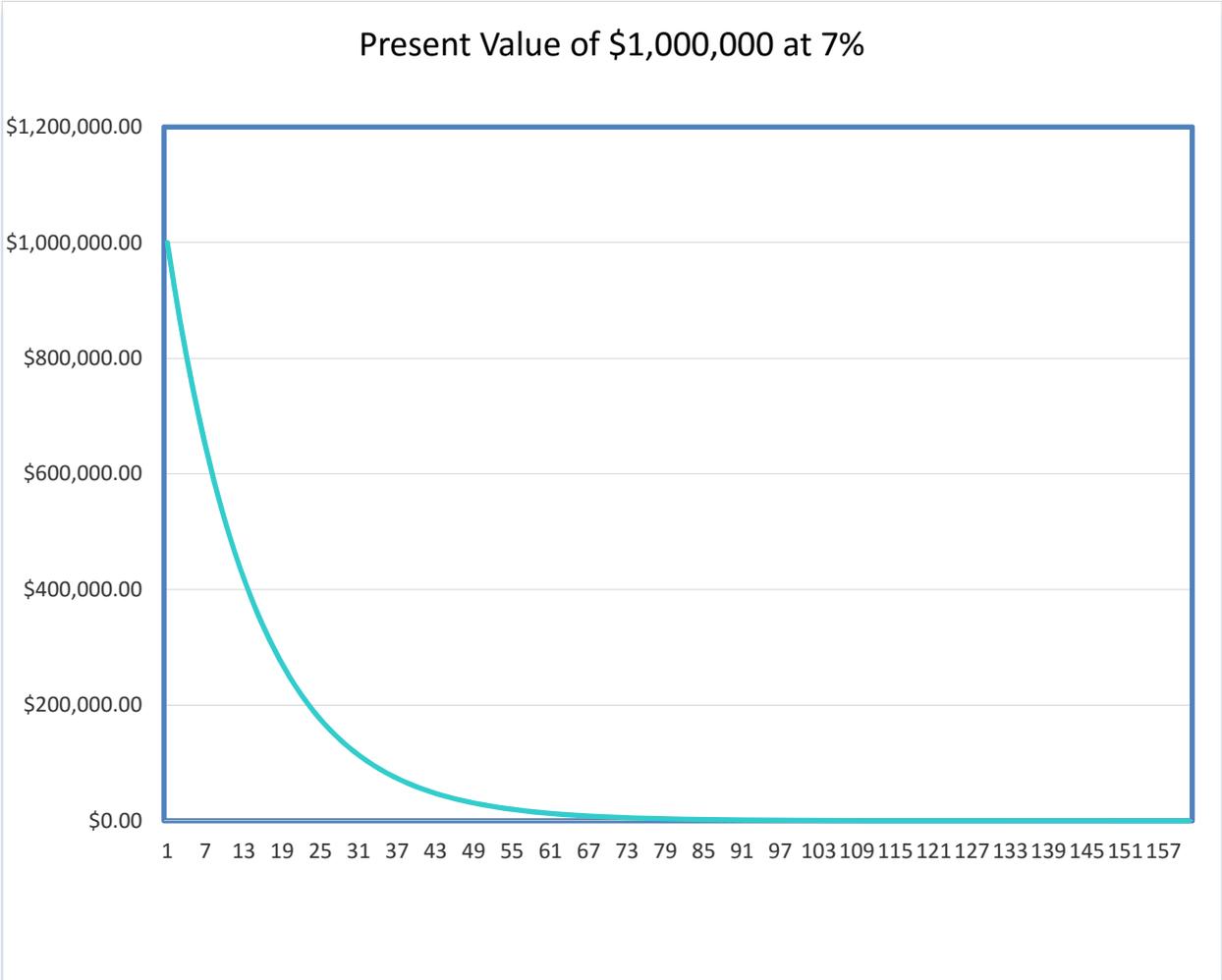
This issue is complicated by the fact that we don't actually know with any certainty how much water can be withdrawn without causing drawdown in some aquifers, particularly as we head into a long-term drought scenario in Texas. If withdrawals need to be curtailed to prevent aquifer drawdown, preference should be given to the communities living over the aquifer, and groundwater districts need the authority to curtail water sales if unexpected drawdown occurs.

3. **Focus on existing reservoirs first and place a low priority on new reservoirs.** The creation of new reservoirs necessarily involves the permanent flooding of land, often highly productive land, and constitutes a government taking that cannot be fully compensated with money. In addition, the cost to society in losing this finite resource is significant. Decisions as to whether to build a new reservoir rather than make improvements to existing reservoirs should take all the costs – not just the cost of condemning the land and physically building the reservoir – into consideration.
4. **Value water properly.** In considering any water marketing proposal, whether of groundwater or surface water, water needs to be valued as the precious, limited resource that it is. The cost of water must reflect more than simply the cost of the infrastructure and physical delivery.

Thank you for considering my testimony. I look forward to working with you to craft policy that protects the welfare and economy of our state, both for our own lifetimes and for future Texans.

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The chart below reflects the present value of \$1 million at a discount rate of 7%, depending on what year the payoff is to occur.



Years