Texas Catholic Conference of Bishops
THE PUBLIC POLICY VOICE OF THE CHURCH

Agenda Topic 8:
Creation

Brief: Water Conservation

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Key Points:

1. Conservation is needed to account for population growth and droughts.
2. The State Water Plan expects conservation to supply 30% of future water.
3. Rural & urban areas must apply appropriate conservation methods.

A Catholic Perspective: Catholic teaching on the physical world begins with an understanding that it is God's creation and given to us as a gift.[1] Each creature reflects a portion of God's infinite wisdom and goodness, and our first parents became nature's stewards when God gave them dominion over nature.[2]

Because Texas water law is a technically complex policy topic which doesn't include direct church ministry, we elsewhere offer legislators and their staff five principles of action, rooted in Catholic Social Teaching, which we hope helps guide legislative proposals:

1. protection of the environment should not undermine the protection of human life,
2. all people, especially the poor, should have access to safe and clean drinking water,
3. state law should help local water boards and districts achieve the common good,
4. we should protect water for future generations' drinking and agricultural needs, and
5. state law should prevent individuals from using water solely for their own benefit.[3]

This paper will apply these principles to the topic of water efficiency and conservation.

Texas Law & Policy: Water is essential to life and our way of life; it has no substitute. Without it, our bodies, crops, livestock, communities, and Texas wildlife will not endure.[4]

Ensuring that water is available for our children is critical and the urgency of this work is underscored by this: Texas' population is the second largest in the U.S., has increased more than any other state since 2000, and is expected to increase from 29.5 to 51 million (70 percent) between 2020 and 2070.[5] Not one of the people who moves to Texas brings water with them. Yet in every decade for the past century, at least one severe drought has struck Texas.[6] As a result, we will need an additional 2.9 trillion gallons of water by 2070.[7]

Texas law on conservation begins with a constitutional provision which establishes that the conservation, preservation, and development of water is a public right and duty.[8] Conservation is defined in law as making water available for future uses by reducing water consumption, loss, and waste, as well as increasing efficiency, recycling, and reuse.[9]

The State Water Plan (SWP), which estimates future water needs and costs, considers conserved water to be a *new* supply of water.[10] As such, the SWP expects conservation to provide about 30 percent of new water, at only 6 percent of the SWP's total cost.[11] The focus upon conservation is positive, but we must succeed in reaching conservation goals or our children and grandchildren will face dire shortfalls.

Agriculture and municipalities are the two leading users of water and have different opportunities to conserve water.

Agriculture currently uses just over 2.93 trillion gallons of water annually, making it the leading user of water in Texas. Advancements in irrigation efficiency, crop genetics, and pest management have allowed Texas farmers to double crop yields using no more water than was used in the 1970s.[12]

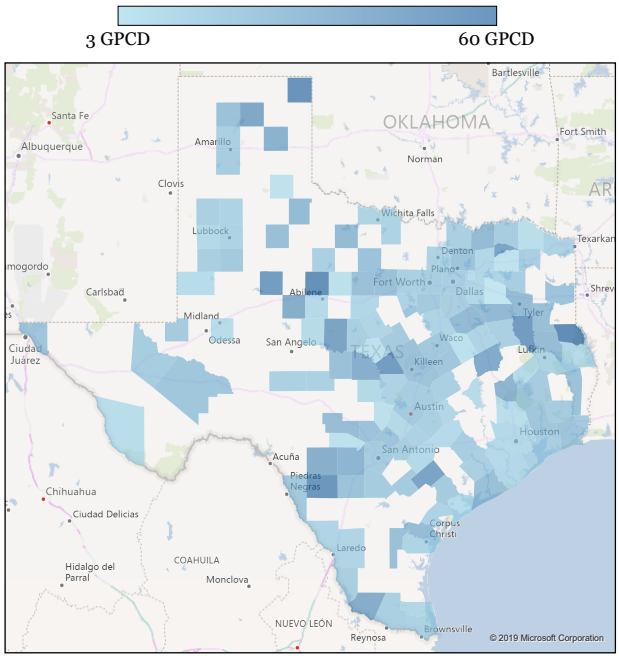
Despite progress, it is difficult to know the total impact of conservation and efficiency efforts because agricultural water withdrawals are largely unmetered. The lack of reliable data may be addressed by installing flow meters and monitoring wells.[13]

One challenge flows from the depletion of aquifers: over 75 percent of water used for irrigation comes from groundwater, which is expected to decline by nearly one-fourth by 2070.[14] A central focus in this crisis is the Panhandle, where the Ogallala Aquifer is the primary water source. The Ogallala provides *half* of water used for irrigation and livestock in Texas, but will decline by 43 percent by 2070.[15] Because the Panhandle has no alternative source of water, it faces the state's largest projected shortages in the future.[16]

Municipalities*:* In 2016, each Texan used an average of 141 gallons of water each day.[17] State laws on municipal use range from requiring efficient plumbing fixtures to requiring certain local entities to file conservation plans, progress reports, and water loss audits.[18]

Texas was one of the first states in the nation to require water loss audits, which quantify the amount of water that is produced but never received by an end user.[19] The average reporting Texas county lost just over 21 gallons per person per day in 2017, with an average value of $728,000.[20] Figure 1 illustrates the severity of loss in reporting counties.

Figure 1: Gallons of water lost per person per day (GPCD), by reporting counties (2017)



Source: Texas Water Development Board, *Summary of Water Loss Audits Reports*, 2017.

Finally, cities may conserve water by establishing rate incentives or landscape watering ordinances.[21] Remarkably, *one-third* of water used by Texas households is for landscapes.[22] Reducing water use for grass is a readily-available conservation method that helps secure water use for future drinking and agriculture.

Call to action: To support the prudent stewardship of water in the Texas legislature, please visit txcatholic.org/creation to find and contact your lawmaker. Please also pray for Texas and for our legislators, that they may uphold laws which strive to make water available for current and future Texans.

The TCCB is a federation of all Roman Catholic dioceses and ordinariates in Texas. There are 8 million Catholics living in our state. To contact us, call our office at 512-339-9882 or find TXCatholic on Facebook and Twitter.

Endnotes

1. Compendium of the Social Doctrine of the Church (CSDC), § 487.

2. Gen. 2:15; Catechism #339.

3. TCCB, *Brief: Water Availability*, Mar. 2019.

4. Texas Comptroller, *Liquid Assets: The State of Texas' Water Resources*, Feb. 4, 2009. 1.

5. Texas Water Development Board (TWDB), *2017 State Water Plan (SWP)*, 49.

6. Ibid., 31.

7. *SWP*, 7. Calculation is based on the need for an additional 8.9 million acre-feet of water.

8. Texas Const. Art. XVI, § 59.

9. TWC § 11.002(8)(B); cf. 30 TAC § 288.1(4); Mary Sahs, *Essentials of Texas Water Resources*, 4th Ed. 23:4, but see discussion on how efficiency may increase water use.

10. *SWP*, 8, 87.

11. TWDB, *An Assessment of Water Conservation in Texas*, Jan. 2018. 26.

12. Water Conservation Advisory Council, *Progress Made in Water Conservation in Texas*, Dec. 1, 2018. 4-5.

13. *Essentials*, 23:3.

14. *SWP*, 70-71.

15. Ibid., 71 Figure 6.10. For more information, visit OgallalaWater.org.

16. *SWP*, 102 Figure 8.5.

17. TWDB, *Water Use Survey Estimates*, 3.

18. *Essentials*, 23:9-10, 16.

19. *Essentials*, 23:16. Loss can occur for several reasons, but a key focus is conveyance system leaks.

20. TWDB, *Summary of Water Loss Audits Reports*, 2017.

21. *Essentials*, 23:11-15.

22. Texas Living Waters Project, *Water Conservation by the Yard*, Mar. 2018. 10.