Environmental Health

Utah Citizens' Counsel Environmental Health Committee

Article 2. All Utahns, young and old, have the right to live and thrive in a healthy environment that includes clean air, land, and water, and share in the responsibility to pass that healthy environment on to succeeding generations.

Introduction

This year's environmental report again focuses on air quality and water availability. The air quality for many days this summer has been in the "moderate" to "unhealthy for sensitive persons" range due to high ozone concentrations.[1] The Environmental Protection Agency (EPA) has again cited Utah for non-attainment in areas with excess particle and ozone concentrations.[2] In July, the State Water Strategy Advisory Team released the final version of their report.[3] We applaud the Team's efforts to educate and make policy recommendations but find their conservation recommendations both misleading and inadequate. This year's report also turns to our concern that citizens of our state exhibit a relatively poor understanding of human caused global warming.[4] The projected doubling of the population in Utah and its effect on pollution and essential resources are also of concern.[5]

Air Quality

In last year's report we welcomed the international efforts to curb greenhouse gas emissions, which resulted in the landmark agreement signed in Paris.[6] The previous administration in Washington signed this agreement. Unfortunately, the current administration has withdrawn U.S. government support for the agreement.[7] It also has withdrawn EPA's rule, called the "Clean Power Plan," to curb emissions from coal fired electricity generating stations.[8]

Utah government has a mixed record on improving air quality. It passed an extension for a tax credit for wind and solar renewable energy installations in homes and businesses. It did not renew tax credits for electric vehicles.[9] Refineries have pledged to convert to Tier 3 fuels in Utah, but progress is slow, with conversions not promised until the end of 2019.[10] Electric vehicle sales in Utah are growing and amounted to 0.81% of new vehicles sold so far in 2017.[11] Of greater concern for both air quality and global warming, is that SUV and light truck sales in Utah represented 67% of all new cars sold in 2016 and reached 70% in the first half of 2017.[12] Nationally, the trend toward buying less efficient new vehicles is not much better, with 63% of 2016 sales being SUVs and light trucks.[13]

Some of our recommendations last year did find support in Utah. Electric vehicle charging stations have increased.[14] Utah House Resolution HCR 18 passed, which recommends that car buyers consider smog ratings of new cars.[15]

Neither House Bill (HB) 457, a bill imposing a tax on carbon emissions, nor a resolution SJR 9, expressing the need to recognize climate change, passed the Utah Legislature in 2017. However, the need to recognize climate change and curb carbon emissions is gaining bipartisan support in Washington. Driven by the efforts of the Citizens Climate Lobby there is now a Congressional Climate Lobby with 26 Republican and 26 Democratic members.[16] Mia Love is the only Utah

Representative in this group. Last year's recommendation to reduce speed limits to save lives and reduce pollution has been ignored so far. Utah vehicle fatalities increased again in 2016, to 281.[17]

Many Utah Citizens Lack Understanding of Human-Caused Climate Warming

Scientists understand the physical basis of climate warming with the same clarity that they understand gravity and electricity.[18] Moreover, the hard evidence that our climate is warming at an unprecedented rate is overwhelming, leading the vast majority of scientists to acknowledge that humans are the cause and that severe consequences await.[19] Yet, Utahns appear to be poorly informed about the cause of climate change. A study by the Yale Program on Climate Change Communication indicates that, based on 2016 survey data, only 43% of Utahns believe climate warming is primarily caused by human activity.[20] This value is 11% below the national average. Only the state of Wyoming has a lower percentage (42%) of citizens who believe humans are the primary cause.

Because the Utah lies in a region that is warming at twice the average rate of North America and the planet,[21] our state will be disproportionally impacted. Local temperature records help put the magnitude of recent warming in perspective. During the entire 20th century, daily temperatures rose to 103^{o} F only four times in the town of Tooele. In contrast, during the first decade of the 21st century, temperatures in Tooele reached this level 28 times.[22] As our temperatures rise, there will be increased evaporation negatively impacting agriculture, municipal water supplies, mountain forests, wetland habitats, and further reducing the level of the Great Salt Lake. Other impacts already include reduced winter snow pack, which further threatens municipal and agricultural water supplies; increased frequency and intensity of toxic algae blooms in our fresh water lakes; and increased summer ozone air pollution. Compounding many of these anticipated problems is Utah's rapidly growing population, projected to double by 2065.[23]

Given that denial of science acts as an anchor, constraining progress, we need to increase public education about the scientific basis of human caused climate change, the risks to our economy and quality of life, and what individual citizens of Utah can do to mitigate the harm. To increase understanding of the human causes of climate change and why scientists are confident of the evidence for climate change, a web site maintained by the National Aeronautics and Space Administration is instructive.[24] Additionally, a recent extensive report by the Global Change Research Program summarizes the current state of our understanding of climate change.[25] Last, The LDS Church has a website explaining the value of environmental stewardship and conservation.[26]

We believe the most effective way to combat climate warming is through a national carbon fee and dividend policy.[27] Various proposals exist,[28] but all would place a steadily rising fee/tax on green-house gas emissions, with all collected fees, minus administrative costs, returned to households as dividends. Phased-in fees on greenhouse gas emissions with dividends for all American households would incentivize reduced fossil fuel consumption, lead to increased adoption of renewable energy, and ultimately drive the transition to a net zero carbon emissions economy.

Water Availability

As was true last year, we remain steadfast in our opinion that future demand for municipal water in our state can be met through conservation and incorporation of agricultural water (because farmland increasingly is developed by municipalities) rather than through investment in major new water projects. For years now, managers of Utah's municipal water (some water conservancy districts and the Division of Water Resources) have warned that demand for water will surpass the currently developed supply in about 25 years, limiting population growth and economic development. The solution, they continue to argue, is investment in major new water projects such as the Bear River Development Project and the Lake Powell Pipeline.[29] We believe these water projects will not be necessary; will threaten our wetland ecosystems, including the Great Salt Lake;[30] and will cost taxpayers far more than the water is worth.[31]

With one of the highest per capita domestic water use in the nation, Utah has extraordinary potential for conservation.[32] Actual wasteful use of municipal water is largely a consequence of taxpayers subsidizing water use. Consequently, individuals do not see the true cost of water use in their monthly bill, giving them little incentive to conserve. Contributing to the low incentive to conserve are relatively flat pricing structures in which homeowners with the highest rates of use pay only slightly more than homeowners with low usage.[33]

In July, Governor Gary Herbert's State Water Strategy Advisory Team released the final version of its Recommended State Water Strategy report.[34] The Advisory Team, formed in 2013, has 38 members who are stakeholders with extensive backgrounds in various aspects of water use and management. Clearly, the process of developing this report has been an important educational experience for all who were directly and indirectly involved. In that sense, the report represents an important dialogue that must continue as we strive for effective policy. The report itself acknowledges the complexity of the issues and the need for additional planning in the coming years.

We applaud the attention the report gives to the negative impact that climate warming will have on the future health of our watersheds and water supply, and the report's clear recommendations for how we can prepare for and minimize the impact of climate change.[35] However, although the report advocates conservation in most chapters (for instance, 1, 4, 5, and 7), in other chapters (3, 8) acknowledgement of the importance of conservation to the health of our water sheds is noticeably missing. Of most importance, we strongly disagree with the report's support for continued use of the property tax to subsidize user fees and fund large water projects.[36] Using property taxes as a funding mechanism for municipal water means that property owners do not see the true cost of water use in their monthly bill, and therefore have little incentive to conserve[37] Ultimately, we are troubled by the absence of clear suggestions on ways the State could incentivize conservation

Commendations

- **The LDS Church** for their advocacy of environmental stewardship
- **Representative Mia Love** for her leadership in combating climate change

- **Utah chapters of the Citizens' Climate Lobby** for their efforts to promote passage of a carbon fee and dividend policy
- **The Utah Legislature's Clean Air Caucus** for its efforts to promote cleaner air

- **Salt Lake City for passage of the** "Energy Benchmarking & Transparency Ordinance"

- **The State Water Strategy Advisory Team** for their efforts to find solutions for water conservation and supply

Recommendations

- **We continue to promote the idea of a pollution fee for cars,** particularly those with high emissions, and suggest reintroduction of Utah HB 457.

- **The Legislature should require new car advertisers to publish gas consumption and pollution ratings.**

- **Utah leaders and planners need to begin questioning the desirability and presumed inevitability of the projected doubling of population** in Utah. This level of growth will make it very difficult to improve air quality in the Wasatch Front counties.

- **The Legislature should reinstitute tax incentives for low emission and electric vehicles.**

- **The Legislature and municipalities should encourage construction of public and residential buildings with low or zero emissions ratings.**

- **The Legislature should consider lowering and enforcing speed limits to reduce pollution and accident rates.**

- **Before taxpayer money is spent on new water projects, we recommend that the Legislature** (1) implement effective mechanisms to **document water resources** and consumer use; (2) adopt policies that **provide strong incentives for conservation**; and (3) **fund repair and modernization** of existing agricultural water infrastructure.

- **We support a Joint Resolution on climate change** such as SJR 9.

- **We urge Governor Herbert to add the state of Utah to the United States Climate Alliance to uphold the Paris Accord.**

- **We encourage cities throughout the state to follow Salt Lake City's lead in adopting building energy use benchmarking and transparency standards.**

Endnotes for Article 2 (Environmental Health)

[1] Emma Penrod, "July Is the New January: Ozone Levels Skyrocket Over Wasatch Front As Inversion-Like Conditions Settle In", *Salt Lake Tribune,* August 2, 2017, accessed September 17, 2017, http://www.sltrib.com/news/environment/2017/08/02/july-is-the-new-january-ozone-skyrockets-over-wasatch-front-as-inversion-like-conditions-settle-in/.

[2] Emma Penrod, "EPA Plans to Classify Utah Air Quality Misses as 'Serious'", *Salt Lake Tribune,* May 2, 2017, accessed September 17, 2017, http://archive.sltrib.com/article.php?id=4722488&itype=CMSID).

[3] "Recommended State Water Strategy," Governor's Water Strategy Advisory Team, accessed September 19, 2017, http://www.envisionutah.org/images/FINAL_Recommended_State_Water_Strategy_7.14.17_5b15d.pdf.

[4] "Climate change: How do we know?" *NASA Global Climate Change*, accessed September 19, 2017, http://climate.nasa.gov/evidence/.

[5] Pamela S. Perlich, et al., "Utah's Long-Term Demographic and Economic Projections Summary," *Gardner Policy Institute, University of Utah*, accessed September 19, 2017, http://gardner.utah.edu/wp-content/uploads/Projections-Brief-Final.pdf.

[6] "Paris Climate Agreement," *United Nations Framework Convention on Climate Change*, accessed September 18, 1917, https://en.wikipedia.org/wiki/Paris_Agreement. As of September 2017, 195 UNFCCC members have signed the agreement, 162 of which have ratified it.

[7] "United States Withdraws from the Paris Agreement," *Wikipedia*, accessed September 18, 2017, htttp://en.wikipedia.org/wiki/United_States_withdrawal_from_the_Paris_Agreement.

[8] "Withdrawal of Proposed Rules: Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or before January 8, 2014," published April 7, 2017, *Environmental Protection Agency,* accessed September 19, 2017, https://www.federalregister.gov/documents/2017/04/03/2017-06518/withdrawal-of-proposed-rules-federal-plan-requirements-for-greenhouse-gas-emissions-from-electric.

[9] Cathy McKitrick, "Clean Air Not a Big Priority for Utah Lawmakers in 2017 Session," *Standard Examiner,*March 12, 2017, accessed September 19, 2017, http://www.standard.net/Government/2017/03/12/Clean-air-not-a-big-priority-for-Utah-lawmakers-in-2017-session.

[10] Amy Joi O'Donoghue, "Chevron's S.L. Refinery Will Produce Low-Sulfur Fuel in 2019," *Deseret News,* April 18, 2017, accessed September 19, 2017, http://www.deseretnews.com/article/865678115/Chevrons-SL-refinery-will-produce-low-sulfur-fuel-in-2019.html.

[11] "DrivingZEV, Sales Section," *A project by GlobalAutomakers*, accessed September 18, 2017, http://www.drivingzev.com/sales. The sales site summarizes ZEVs (Zero Emission Vehicles) in every U.S. State for YTD (Year to Date) 2017 and ZEVs sold since 2011. ZEVs sold in Utah are 573 or 0.81% of all cars sold in 2017 YTD.

[12] Data calculated from the official Utah State Tax Commission website, accessed September 16, 2017, http://tax.utah.gov/econstats/mv/new-vehicle-sales. This web site lists quarterly new motor vehicle sales since 2010, including the first 2 quarters of 2017. It differentiates passenger cars and light trucks.

[13] Associated Press, "2016 U.S. Auto Sales Set a New Record High, Led by SUVs," *Los Angeles Times*, January 4, 2017, accessed September 19, 2017, http://www.latimes.com/business/autos/la-fi-hy-auto-sales-20170104-story.html.

[14] "Salt Lake City Debuts 28 New Electric Charging Stations," accessed September 19, 2017, http://www.slcgov.com/salt-lake-city-debuts-28-new-electric-vehicle-charging-stations.

[15] H.C.R. 18, Concurrent Resolution Encouraging Utahns to Consider the Smog Rating When Purchasing a Vehicle, accessed September 19, 2017, https://le.utah.gov/~2017/bills/static/HCR018.html.

[16] This is a bipartisan group of members of the U.S. House of Representatives who are exploring options to reduce risks associated with climate change. The Citizens Climate Lobby presents details of this group on its website, accessed September 19, 2017, https://citizensclimatelobby.org/climate-solutions-caucus/.

[17] "Utah Fatal Crash Summary 2016," *Department of Public Safety of Utah,* accessed September 16, 2017, https://highwaysafety.utah.gov/wp-content/uploads/sites/22/2015/02/2016FatalCrashSummary-3.pdf. This report shows an increase of 30 deaths over the previous 3 year average, with speed the leading contributing factor.

[18] "Causes: A Blanket Around the Earth," *NASA, Global Climate Change,* accessed September 19, 2017, https://climate.nasa.gov/causes/.

[19] Donald Wuebbles, et al., "Climate Science Special Report (CSSR) (Final Clearance, Fifth Order Draft)," *U.S. Global Change Research Program*, June 28, 2017, accessed September 19, 2017, http://www.nytimes.com/packages/pdf/climate/2017/climate-report-final-draft-clean.pdf?mcubz=0.
[20] "Yale Climate Opinion Maps–U.S. 2016", *Yale Program on Climate Change Communication*, accessed September 19, 2017, http://climatecommunication.yale.edu/visualizations-data/ycom-us-2016/.
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[22] Professor Robert Davies, Utah State University, email message to Carrier, July 23, 2017.
[23] Perlich, "Utah's Long-Term Demographic."
[24] "Causes: A Blanket Around the Earth."
[25] Wuebbles, "Climate Science Special Report."
[26] "Environmental Stewardship and Conservation," *The Church of Jesus Christ of Latter-Day Saints*, accessed September 19, 2017, https://www.lds.org/topics/environmental-stewardship-and-conservation?lang=eng.
[27] See "Carbon Fee and Dividend Policy and FAQs," *Citizens' Climate Lobby*, accessed September 19, 2017, https://citizensclimatelobby.org/carbon-fee-and-dividend/.
[28] Ibid.
[29] "Recommended State Water Strategy."
[30] Wayne Wurtsbaugh, et al, "Impacts of Water Development on the Great Salt Lake and the Wasatch Front," *Watershed Sciences Faculty Publications* (2016), accessed October 23, 2016, http://digitalcommons.usu.edu/wats_facpub/875/.
[31] Gail Blattenberger and Gabriel Lozada, Letter to Governor Gary Herbert from 19 university economics faculty stating their concerns that Utah taxpayers will ultimately be required to pay for 72% or more of the costs to build and maintain the Lake Powell Pipeline (2016), accessed October 23, 2016, http://utahrivers.org/wp-content/uploads/2016/09/2016-Letter.pdf.
[32] "A Performance Audit of Projections of Utah's Water Needs," *Office of the Legislative Auditor General,* 2015, accessed October 19, 2016, http://le.utah.gov/audit/15_01rpt.pdf. See also "Recommended State Water Strategy."
[33] Ibid., iii, iv, Fig. 2, 38.
[34] "Recommended State Water Strategy."
[35] Ibid., 1, 5, 26, 70-77.
[36] Ibid., 21, 81-82.
[37] "A Performance Audit." Existing pricing policy for municipal water in most Utah cities does not encourage efficient water use. The use of property tax to subsidize the cost of water reduces customer incentive to conserve. Additionally, the relatively flat pricing structure that characterizes most Utah municipalities provides no incentive to use water efficiently. Many western cities outside Utah use block rate structures that charge consumers substantially higher prices as consumption increases. In contrast, the tiered rate structures in many Utah municipalities entail relatively minor increases in cost that provide little or no incentive to conserve. The city of Orem represents a notable exception, having adopted a tier rate structure in 2016 that does appear to be providing incentive to conserve. Emma Penrod, "Orem Man Threatens to Kill his Lawn if City Doesn't Cut Its Water Rates", *Salt Lake Tribune,* September 24, 2017, accessed October 9, 2017, http://www.sltrib.com/news/environment/2017/09/24/orem-man-threatens-to-kill-his-lawn-if-city-doesnt-cut-its-water-rates/. For a comparison of various City Water Rates, see "Standing Up For Utah's Needs, 2016 Report," 14 (Figure 2), *Utah Citizens' Counsel*, accessed October 8, 2017, www.utahcitizenscounsel.org.