



SIERRA CLUB

LONE STAR CHAPTER

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To: Chairman Tracy King, Committee on Natural Resources
Members, Committee on Natural Resources

From: Alex Ortiz, Water Resources Specialist, Lone Star Chapter, Sierra Club;
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Re: Examine the condition of Texas' water and flood mitigation infrastructure capabilities and consider future infrastructure needs. Evaluate sustainable funding sources to provide for water project development and infrastructure repair and replacement. Examine and make recommendations for cost-effective improvements that enhance the state's available water supply.

Dear Chairman King and Committee members,

The Lone Star Chapter of the Sierra Club is pleased to offer these written comments to the committee to go along with our oral invited testimony on the charge related to water and flood mitigation infrastructure.

Our comments cover several different issues:

- (1) Opportunities for prioritizing water conservation: including funding from the IIJA and IRA for water infrastructure and programs that will bolster conservation, as well as SWIFT funding.
- (2) Opportunities to enhance the Economically Distressed Areas Program (EDAP) to include onsite flood and local runoff mitigation; and
- (3) Opportunities to promote superior building codes and land use that will help lower risks to floods while promoting energy efficiency and water conservation

Prior to turning to specific points, we want to remind the committee of the unique situation Texas finds itself in. The climate is changing. Reports, including the October

2021 report by the Office of the Texas State Climatologist are showing how rapidly weather patterns are and will continue to change in Texas, as well as how our coastline will continue to be weakened by coastal land loss and sea level rise.

Extreme heat, drought, wildfires, rapid and intense rainfalls, and more powerful hurricanes - not to mention the polar vortex causing Winter Storm Uri in 2021 - have battered Texas over the last few years. Our infrastructure needs are growing along with our population in part due to the changing climate. One must consider only the last few weeks where sudden flooding – reportedly once in a 1,000-year event – in Dallas is contrasted with vast areas of the state facing extreme high temperature and intense drought. Moreover, while we’re starting to see more precipitation in the state, that doesn’t mean our drought is “over” by any means.

The status quo is not an option, and as a state we must adopt strategies that help mitigate against the impacts of the changing climate even as we aim to grow. Investing even more in programs that help us conserve water, avoid evaporation, and mitigate the impacts of intense storms is more important than ever. We must be smarter in our development, in our land use practices, in our building codes and in the use of green infrastructure, to take advantage of our natural resources to better protect and preserve our way of life. And we must do it in a way that is accessible and equitable to all Texans and communities.

I also want to highlight that we’re pleased that during the recent Sunset decisions on TWDB that the Commissioners adopted two important recommendations:

The first, is a management action “[directing] TWDB to consult with the Office of the State Climatologist at Texas A&M University in the preparation of regional and state water plans to receive information and projections to identify regions of the state that are likely to experience severe drought or excessive rainfall. (Management action – nonstatutory.”

The second, “Authorize[s] regional water planning groups, by statute, to use a drought worse than the drought of record as the baseline for planning purposes.”

These represent important shifts in Texas’s approach to drought management and water supply planning that we must assure are met with strong support.

Texas needs to take a more comprehensive approach in addressing both water supply and flood risk management & mitigation. By that, we mean – for example, in

regard to water supply – we should consider water conservation, drought response, and water & wastewater infrastructure, as well as sustaining necessary instream flows and freshwater inflows to bays and estuaries, as all parts of the strategies we develop and implement to make sure that Texas has a clean and dependable water supply to meet the needs of people and the environment well into the future. Moreover, as a critical aspect of meeting the water needs of people, Texas must specifically assure that all Texans residents – including economically and socially disadvantaged communities as well as small, rural communities – have equal access to that clean and dependable water supply.

(1) The State Needs to take a Comprehensive Effort in Prioritizing Water Conservation

(A) Some of the elements of this comprehensive approach to assuring a clean and dependable water supply for Texas include:

- (1) Making water conservation and efficiency the first priority for all public water utilities.** This assures that we get the most of the water we already have, don't waste it (as many people do by using potable water to overwater their outdoor landscapes). Texans have made great strides in reducing per capita water use, but the impressive water conservation efforts of utilities such as those in San Antonio, Austin, and some of the cities in North Texas are not universal among Texas water utilities, as shown by the most recent Texas Water Conservation Scorecard produced by the Texas Living Waters Project in 2020. We need to make municipal water conservation universal in Texas so that we know more precisely how much more water we really need as we look forward to our next cycle of state water planning.
- (2) Launching an aggressive state effort to enhance the development and implementation of drought response plans by water utilities around the state.** This assures that short-term and mid-term droughts may be dealt with through reasonable cutbacks on non-essential water uses until the dry period is over. That effort probably needs to include earlier triggers for voluntary cutbacks and then required cutbacks if a drought progresses as well as triggers that reflect meteorological conditions and soil moisture levels (information that is readily available

from sources such as the U. S. Drought Monitor and Texas A&M University), not just aquifer or reservoir levels at any one time. Those kinds of triggers may allow more pro-active measures in early stages of drought, which is better than scrambling to reduce water use as supplies drop precipitously. The point is that we may be better able to use our water infrastructure dollars where most needed if we use drought response plans wisely to deal with limited droughts.

- (3) **Becoming more innovative in the water supply projects that we pursue, especially those that may have other benefits.** One example is wastewater reuse, both potable and non-potable. This again is one type of infrastructure project that makes the most sense. By putting more money into wastewater reuse, we can treat wastewater to make it usable for various purposes rather than simply returning treated wastewater to a stream. While a certain volume of “return flows” should be maintained for instream flows and freshwater inflows to bays and estuaries, the holder of a consumptive water right legally may use all of that water right without returning the water or a portion of it to the stream (absent specific conditions in that water rights holder’s permit). By treating water for reuse several times, the water right holder (and here we are talking primarily about water utilities) makes the highest and best use of the water and may be able to reduce the volume of water taken out of a stream on an ongoing basis. Some utilities in Texas such as those in Brownwood and Wichita Falls have been leaders in this field.
- (4) **Making the best use of “nature-based” approaches that serve multiple water benefits.** For example, preservation of green spaces over recharge areas for aquifers help to allow natural recharge of those groundwater sources, which sustains those aquifers over longer periods and keeps that water source available for use. If those green spaces are also adjacent to streams or located in key parts of a watershed, they may also serve the benefit of retaining flood waters and reducing flood risk downstream. Plus, these green spaces may be used for certain types of public or private recreation, depending upon the ownership of these areas.

By emphasizing the preceding conservation strategies, we make the best use of public dollars and private efforts. That means that we can better target where infrastructure dollars are truly needed for such water projects as aquifer storage & recovery or brackish desalination, among other possible projects. Those projects – where they are appropriate and have undergone a proper vetting process evaluating their costs and environmental impacts, among other factors – may then be pursued where they are most needed.

The preceding example priorities will be achievable in light of (Infrastructure Investment and Jobs Act) IIJA and (Inflation Reduction Act) IRA Funding Opportunities

(B) There are Opportunities in the IIJA and IRA for water infrastructure and programs that will bolster water conservation:

The recent passage of the IIJA is a unique opportunity for the state. The IRA also includes some new pots of money for drought relief and impacted communities from climate extremes, and these pots of money - largely competitive - could help bolster state efforts.

In addition, we should pay attention to smaller pots of money available in the IIJA to the state including the Emergency Watershed Protection Program and Watershed and Flood Prevention Operations available through the Department of Agriculture. There are some \$800 million available through this program to help protect and restore watersheds which could be important to Texas though rules have yet to be released.

Far greater amounts of money are made available through the EPA, mainly \$11.7 billion through the Clean Water State Revolving Fund and \$11.7 billion through the Drinking Water State Revolving Fund. Texas is scheduled to receive some \$2.3 billion, and the TWDB is the agency that will be responsible for administering these monies, and have already received some initial allotments. The legislature must assure that the TWDB has the necessary matching (10% funds) given the burgeoning needs.

We are part of a coalition of organizations that have been asking that TWDB prioritize funding projects that are economically distressed or disadvantaged for both drinking water, wastewater, stormwater runoff and flood infrastructure. The large infusion of federal funds into the state revolving funds could represent a large down payment for programs that help conserve water, prevent water waste, and in some cases recycle

water for local use. Thus, as an example, replacing aging, leaking pipes in a water or wastewater treatment system can help extend water supply and prevent the need for finding additional water sources.

(C) Relatedly: The State needs to prioritize achieving the SWIFT program's water conservation/reuse funding goals.

Another important funding mechanism, not directly impacted by the IJA is the SWIFT Fund. The Sierra Club would like to highlight that TWDB's track record in meeting the conservation/reuse funding goals set by the Texas Legislature for the implementation of the SWIFT program has been less-than-stellar.

During the 2013 legislative session in which the SWIFT program was created, the Legislature established a goal that TWDB "shall undertake to apply not less than" 20% of the SWIFT funds to conservation or reuse projects (a related goal was not less than 10% towards projects for rural political subdivisions or agricultural water conservation). The recent Sunset staff report found that in the 2016-20 funding cycles TWDB fell far short of that goal: over that five-year period only 3.63% of total funds closed went to water reuse projects and only 3.44% went for water conservation. In other words, at best TWDB only reached a third of the goal. Obviously, political subdivisions initiate projects and then seek financial assistance from TWDB for their projects. The agency cannot force political subdivisions to bring water reuse or conservation projects to it for SWIFT funding. If political subdivisions do not apply for SWIFT funding for reuse or conservation, then the statutory goal of not less than 20% will not be reached.

Certainly, factors such as the question of how to generate a revenue stream from conservation projects that will help a political subdivision repay TWDB for financial assistance is an issue that complicates applying for SWIFT funding for conservation. However, TWDB could take certain proactive steps to improve the prospects for applications for SWIFT assistance for conservation and reuse and thus help the agency meet the legislative goal.

Specific guidance and technical expertise from TWDB to potential applicants could enhance prospects for reaching the "not less than 20% conservation or reuse" goal of the SWIFT program.

Specifically, we recommend that TWDB undertake a pro-active effort to achieve the statutory goal of not less than 20% of SWIFT funding for water conservation or reuse, by one or more of the following: • preparation of a TWDB guidance manual for political subdivisions with examples of conservation or reuse projects for which they could apply for SWIFT financial assistance and an enumeration of ways in which the recipient may meet financial obligations for repayment • encouragement to political subdivisions applying for SWIFT for infrastructure projects to incorporate water conservation program components into the application as an adjunct to the infrastructure project, and development of TWDB guidance to facilitate that effort • preparation of model water conservation programs (not just templates for conservation programs) for different categories of political subdivisions, based on size of population served, that would incorporate components eligible for SWIFT funding.

We recognize that SWIFT funding is not the only means by which TWDB advances or may advance water conservation in Texas, and we acknowledge the many efforts by the agency's water conservation staff and its Board members to promote and facilitate more efficient water use in all sectors of the state's population and economy. However, we believe that it is critical that the agency uses all resources available to advance conservation, which accounts for roughly a third of the water management strategies in the state water plan to meet Texas water needs over the next 50 years. The funding for conservation and reuse available through SWIFT is one of those resources, and the agency should redouble its efforts to ensure that this resource is not left largely untapped with respect to conservation and reuse projects.

(2) There are opportunities to enhance EDAP to include onsite flood and local runoff mitigation

Texas must ensure an equitable distribution of state financial assistance for water, wastewater, and flood risk reduction that adequately addresses the unmet needs of disadvantaged communities and economically distressed areas. We need to make sure that federal monies administered by TWDB – including new federal funds – meet the needs of communities and populations that have been traditionally underserved. Of course, TWDB for a period of over 30 years has had the ability to help address the water supply and wastewater needs of colonias and other socially vulnerable communities through the Economically Distressed Areas Program (EDAP) that Sierra Club has supported and lobbied for since its creation in 1989. The Texas Legislature and Texas voters in 2019 demonstrated strong support for EDAP through the proposal

and approval of an additional \$200 million in bond authorization for EDAP. That additional authorization was made tangible by the Legislature in 2021 through a sizable commitment of appropriations to TWDB for EDAP debt service, which will allow new applications to be made for EDAP funds to serve the water and wastewater needs of under-served communities. We believe that the new funding for EDAP, the infusion of federal infrastructure funding to Texas, and the relatively new flood mitigation funding programs (which may be bolstered in the next session of the Legislature) provide the opportunity for TWDB to make a dramatic impact in meeting water, wastewater, and flood mitigation needs of those Texans who have not had the benefit of services that most of us enjoy. However, the State of Texas must be sure that these monies for disadvantaged communities are spent wisely and directed to those most in need.

An independent assessment of TWDB's track record in that regard by an outside entity with the expertise to conduct such an assessment may also be valuable. A fresh set of eyes almost always identifies opportunities for improvement that a self-assessment does not. Continuously evaluating the prioritization process of the agency as well as whether the funding *actually* benefits Texas's most vulnerable communities is essential to making sure that those communities have access to the resources they need.

In addition, we believe that EDAP should be expanded to address additional issues beyond water and wastewater service to include residential drainage as an eligible project to address the public health concern of standing water and improper drainage in the areas intended to be served by the program. Stormwater runoff is a longstanding problem in many communities and assuring that funding including grant funding can address these issues is important. In many cases, green space, berms, habitat restoration and other natural infrastructure can be a good way to address local water runoff and flooding and EDAP could be expanded to assess these issues.

(3) The State has opportunities to enhance building codes and local development ordinances to reduce water use and enhance flood mitigation.

Texas has often lagged behind other states in the adoption and implementation of building codes. Updating and enforcing modern building codes that promote resilient building design creates a built environment that can absorb greater amounts of rainwater on site, lower water and energy use, and provide real shelter-in-place. Building codes are an effective and unique way to require resilient building design, and to promote water conservation, energy efficiency, and the use of onsite energy systems

like back-up power systems, energy storage and onsite solar, which can be developed both for commercial and residential systems. Modern codes like the 2021 ICC (International Code Council) suite of codes include provisions to encourage the use of onsite power, electric vehicles, and resiliency to high winds and flooding, as well as ways to conserve water and keep water runoff to a minimum through the use of design, site selection and the use of native vegetation. Both the 2021 International Plumbing Code and the alternative 2021 Uniform Plumbing Code include major water saving technologies. Some jurisdictions have also implemented above-code programs such as meeting EPA's EnergyStar program for new homes, or the International Green Construction Code 2018 for commercial buildings. In addition, local amendments like EV-Ready, Solar-Ready and Electric-Ready can help encourage the incorporation of local generation and back-up power.

States like Florida have in recent years implemented a statewide effort to adopt building codes that are resilient to storms. In Texas, 5 different state agencies have some regulatory authority over building codes, while larger home-rule cities have significant ability to adopt their own standards. Counties have significantly less ability to adopt and enforce building codes and standards. The inconsistency of building codes and standards creates a greater risk to homeowners and insurance carriers and leads to the same buildings being damaged and rebuilt, rather than resilient in the face of our increasingly common disasters.

As we acknowledge the 5th anniversary of Hurricane Harvey, there are both incentives, requirements and funding opportunities for cities, counties and the state as a whole to modernize our codes and rebuild in a more resilient way. Including recommendations on adoption of the 2021 ICC suite of codes should be part of the state water plan and state flood plan.

The Texas State Building Code is Improving but still Outdated – During the 87th Legislature, the Texas Legislature adopted HB 738, which updated Local Government Code Chapter 214 Subchapter G, and made the 2012 International Residential Code and the 2012 International Building Code the state minimum for cities of a certain size. While an improvement from the previous 2006 code, the new code still references an outdated building code. Current law limits the minimum standard to municipalities with populations over 100,000. Currently that would only apply to 39 incorporated jurisdictions. The municipal authority for code adoption and enforcement has enabled cities to protect their citizens, without mandate. Transitioning from the 2012 code to the adoption of the most recent suite of 2021 codes will ensure that as our state population

continues to grow, our buildings will remain resilient in the face of increasingly common climate stressors.

Unincorporated Limits – Local Government Code 233 Subchapter F, gives counties the authority to adopt building codes, but specifically does not authorize them to collect fees or inspect to enforce. Giving counties these powers would allow counties to take a more active role in planning for their growth and future development.

Windstorm Codes – Texas Insurance Code Chapter 2210 authorizes the Texas Department of Insurance to establish standards through rule in order for buildings in coastal counties to be covered by state windstorm insurance. Recently, TDI updated the codes to the 2018 ICC codes, which go into effect on September 1, 2020.

While individual builders can apply more advanced codes to an individual building or site; however, they are most effective at reducing flood impacts if they are part of an overall strategy to raise and enforce modern building codes, and distributed and integrated across an entire neighborhood or community.

Adoption and implementation of modern codes, like the 2021 IRC, 2021 IBC and 2021 IECC can reduce runoff and flash flooding while generating additional benefits such as improved air and water quality, reduced energy and water use, and lower insurance costs.

Energy Code. The state last adopted the 2015 IECC (energy code) as part of legislation in 2015. While the State Energy Conservation Office has taken public comment on possible adoption of the 2021 IECC - which uses about 10% less energy than previous codes – a potential statutory problem with an unrelated bill has stymied SECO from adoption. The Sierra Club is presently working with several stakeholders on a fix to this issue so that Texas can move forward on statewide adoption of energy codes.

In addition to funding that resulted from Hurricane Harvey, the IIJA does also potentially provide funding to Texas to help implement advanced building codes. Under the Department of Energy, Texas through the State Energy Conservation Office could get access to approximately \$10 to \$15 million for cost-effective code implementation for efficiency and resiliency. Under this potential program, SECO would partner with local governments and others on implementation of updated building codes, leading to

homes and businesses being built in a way that reduces risk from climate extremes, and saves water and energy.

In closing: It is the state's responsibility to assure the resilience of Texas communities in the face of disaster. We know that with climate change will come more unpredictability, and the state can take action in the upcoming legislative session to protect Texans across the state from both flood and drought.

I sincerely thank you all for your time and the Sierra Club Lone Star Chapter looks forward to working with y'all on these issues throughout the upcoming session.