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DRAFT Unique Stream Segments and Reservoir Sites, and Regulatory, Administrative, and Legislative Recommendations

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Chapter 8: Unique Stream Segments, Unique Reservoir Sites, and Other Legislative, Policy, and Regulatory Recommendations

[31 TAC §357.43]

8.1 Recommendations Concerning River and Stream Segments Having Unique Ecological Value

Regional water planning groups (RWPGs) are given the option of designating stream segments having "unique ecological value" within their planning areas, using five criteria to identify such segments.

1. Biological Function
    - Quantity (acreage or areal extent of habitat), and
    - Quality (biodiversity, age, uniqueness).
2. Hydrologic Function
    - Water Quality,
    - Flood Attenuation and Flow Stabilization, and
    - Groundwater Recharge and Discharge.
3. Occurrence of Riparian Conservation Areas
4. Occurrence of High Water Quality, Exceptional Aquatic Life or High Aesthetic Value
5. Occurrence of Threatened or Endangered Species and/or Unique Communities

The Llano Estacado Regional Water Planning Group (LERWPG) has chosen not to designate any stream segments as having unique ecological value.

8.2 Recommendations Concerning Sites Uniquely Suited for Reservoir Construction

Previously, the LERWPG identified Post Reservoir and Jim Bertram Lake 7 as unique sites suited for reservoir construction. Each site was associated with a request by a potential local project sponsor to include the project as a recommended or alternative water management strategy (WMS) in the 2026 Llano Estacado Regional Water Plan (LERWP). During the April 24, 2019, meeting of the LERWPG, Post Reservoir and Jim Bertram Lake 7 were designated as unique reservoir sites in the 2021 LERWP.

8.2.1 Post Reservoir

With the passage of House Bill 3096 (HB 3096) in 2001, the 77th Texas Legislature designated the site of the proposed Post Reservoir as a unique reservoir site. The 80th Texas Legislature placed a

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"sunset provision" on reservoir sites that were designated by the 2007 state water plan as unique, but because the Post Reservoir designation was made in 2001 by standalone legislation, it is not affected by this provision. The LERWPG has included Post Reservoir as an alternative strategy for the City of Lubbock.

On August 4, 2014, the U.S. Fish and Wildlife Service (USFWS) listed the sharpnose shiner (*Notropis oxyrhynchus*) and smalleye shiner (*Notropis buccula*) as endangered under the Endangered Species Act[1]. The sharpnose shiner's natural historical range included the Brazos, Wichita, and Colorado rivers, and the smalleye shiner was native to the Brazos River. Both species are now confined to the river segments of the Brazos River Basin upstream of Possum Kingdom Reservoir, including portions of Crosby and Garza counties. When listing the shiners, the USFWS also designated approximately 623 miles of the Upper Brazos River Basin as critical habitat. This area includes 11 Texas counties, 2 of which are within the Llano Estacado Region (Crosby and Garza counties). This critical habitat designation will likely impact this project. The shiners listing and potential impacts on the Post Reservoir project are discussed in more detail in Appendix D.

Jim Bertram Lake 7

With the passage of Senate Bill 675 (SB 675) in 2007, the 80th Texas Legislature designated the site of the proposed Jim Bertram Lake 7 as a unique reservoir site. The 80th Texas Legislature placed a sunset provision on reservoir sites that were designated by the 2007 State Water Plan as unique. Water right application 5921, filed in 2005 by the City of Lubbock, is currently pending with the Texas Commission on Environmental Quality (TCEQ). The LERWPG continues to support this legislative designation and has included Jim Bertram Lake 7 as a recommended WMS for the City of Lubbock.

The proposed Jim Bertram Lake 7 is part of the Jim Bertram Lake System (previously known as the Canyon Lake System). The lake system along Yellow House Draw and Yellow House Canyon consists of eight small dams and five small lakes: Lakes 1, 2, 3, 5 and 6. Jim Bertram Lake 7 will be located directly upstream of Buffalo Springs Lake, with a proposed capacity of 20,000 acre-feet (ac-ft).

The City of Lubbock submitted an environmental information document (EID) for the Jim Bertram Lake 7 to the TCEQ in July 2011. With proposed inundation of 774 acres of ranch land, this strategy will have an environmental impact. No federal- or state-protected aquatic species were found at the project site, although a population of Texas horned lizards (a Texas threatened species) and 17 archaeological sites exist on site. The EID acknowledges the need for a mitigation plan to compensate for unavoidable impacts.

The LERWPG does not designate any additional sites as uniquely suited for reservoir construction in the 2026 LERWP.

[1] U.S. Fish and Wildlife Service (USFWS). 2016. Sharpnose shiner and smalleye shiner. Arlington, Texas Ecological Services Field Office. Available at https://www.fws.gov/southwest/es/ArlingtonTexas/pdf/Brazos%20Shiners%20Fact%20sheet%202016%20FINAL.pdf

8.3 Other Legislative Recommendations

The LERWPG established a policy workgroup to discuss issues concerning state water policy and to formulate proposed positions for the LERWPG to consider for recommendation to the Texas Water Development Board (TWDB) and the Texas Legislature. As the population and economic demands grow, water supplies become more stressed. These developments together with recent drought conditions make it increasingly important for water planning groups to consider the policies surrounding the development of proposed water management strategies.

8.3.1 Importance of Agriculture and Stewardship

The LERWPG recognizes the importance of agriculture in the region. Agricultural lands represent the major land use in the region and maintain the greatest area for recharge and capacity for water storage in Texas soil and aquifer systems. The use of water in the region for food and fiber production is the major driver of economic activity in the region, and is the justifiable major user of water.

The LERWPG supports agricultural production techniques and technologies that enhance soil water holding capacity, enhance natural recharge of aquifer systems, and regenerate agricultural systems through improved multispecies cropping rotations, including the techniques of cover crops, poly-cultures, and pasture cropping.

The use of ruminants in grazing systems is of particular importance in the Llano Estacado Region because it brings forth improved nutrient cycling, improves plant health, uses the beneficial climate for livestock, and can help achieve a long-term economic benefit of diversification, providing a move from large-scale, intensively-irrigated monoculture crop acres to more regenerative models.

Education about techniques that halt region desertification is critical to all inhabitants' future. The entire region must come together to stop bare ground encroachment. The LERWPG supports a focus on methods that promote long-term agricultural community viability and move away from supporting industry segments and business models that can lead to areas of water aquifer deserts or areas of reduced water quality. The LERWPG realizes that the economic and social value of water is ever more important and that the value of high quality safe water in the region and world will forever remain an issue to be protected by means that are just and fair.

The LERWPG supports funding for water education and research as it pertains to developing a continually-evolving set of best management practices (BMPs) in each segment of the agricultural industry, and financial incentives to help producers steward in a balance between recharge with usage.

Planning efforts in the past have contended that mining groundwater at unsustainable rates was one method of planning for the futures. The LERWPG no longer supports the concept of justifiable long-term water table decline by any stakeholder or user group. Having aquifer-stored water available during periods of drought will remain its most critical resource time for agriculture. According to select planning group members, without water, farms and civilization will fail in this region and that it is not possible to have civilization without agriculture.

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Non-Municipal Water Demand Estimation

The LERWPG recommends including RWPG interest group representatives in developing methodologies for non-municipal demand projections. For example, this could include convening a committee of industrial business sector representatives, including steam-electric, mining, and manufacturing interests, to assist the TWDB in developing the methodology for industrial water demands, and an agriculture committee for determining irrigation and livestock water demands. The proposed involvement by non-municipal water user groups in developing water demands could achieve better acceptance of the TWDB-calculated water demands by local interests in future regional water planning cycles.

8.3.2 Planning Issues for the Agricultural Sector

The LERWPG is concerned that the regional water planning process seems to be geared more toward industry and municipalities and does not help solve the problems faced by the agricultural industry. While municipal and industrial water users exhibit a more consistent water use pattern, agricultural water use fluctuates greatly. This fluctuation is a product of commodity prices, growing season rainfall, and other factors. The agricultural projections do not reflect actual conditions, showing large water needs in the agricultural sector that skew the region's water needs, given that producers will change their practices as mandated by economics and groundwater availability. Water supply projects cannot be developed and implemented in the agricultural sector as they can in other sectors, and thus the planning process does not satisfy agricultural water needs. The LERWPG would like there to be a better way to adapt the process to allow greater participation for agricultural interests in order to realistically address the water supply problems.

8.3.3 Funding for Project Implementation

Since the completion of the 2001 LERWP, it has been clear that some level of state financial assistance will be required, both within the Llano Estacado Region and statewide, in order to implement regional water plans within the necessary time frame. The LERWPG strongly supports the funding that the Texas Legislature has provided for project implementation in past years and would like to thank the Texas Legislature for creating the State Water Implementation Fund for Texas (SWIFT) loan program. The SWIFT program is a step in the right direction, and the LERWPG acknowledges that progress toward funding the necessary projects has been made; however, the LERWPG

AGRICULTURAL WATER PLANNING

- The Llano Estacado Regional Water Planning Group (LERWPG) supports agricultural production techniques and technologies that enhance soil water-holding capacity and natural recharge of aquifer systems, and regenerate agricultural systems through improved multispecies cropping rotations.
- The LERWPG would like to adapt the Texas Water Development Board's planning process to allow greater participation for agricultural interests to realistically address the region's future water supply.
- State Water Implementation Fund for Texas (SWIFT) funding is not available to individual agricultural producers, making it difficult for a region dominated by agriculture to take advantage of Texas' current funding opportunities.

recommends that additional programs be developed that offer direct grants and/or cost-sharing arrangements in addition to the SWIFT loan program. The LERWPG recommends ongoing dedicated funding for regional and state water plan projects so that future generations of Texans will have reliable, affordable, and sufficient water supplies.

The Llano Estacado Regional Water Planning Group recommends inviting regional water planning interest groups to help in developing methodologies for non-municipal demand projections in order to achieve greater local acceptance of calculated water demands.

The LERWPG supports the implementation of high-priority projects and would like to see additional funding that supports completion of the following.

- Implement water management strategies (WMSs) and water conservation incentives for water user groups (WUGs) in the plan, including loans for public water supply, brush management, water conservation, and research/development of drought tolerant species and more efficient technologies.
- Increase state public education programs regarding water supply issues, including water conservation.
- Continue funding and support for collecting, processing, and analyzing water data needed to continually update and improve understanding of regional surface and groundwater resources.
- Continue funding and support for ongoing development and improvements to the TWDB groundwater availability models (GAMs) for Texas' major and minor aquifers and to the Texas Commission on Environmental Quality (TCEQ) water availability models (WAMs). The LERWPG fully appreciates and recognizes the importance of the systematic review and integration of new data and effects of changed conditions for re-calibration and re-verification of these models, and feels it is imperative that funding for this effort be sustained.

8.3.4 Planning Process Improvements

The LERWPG proposes that the planning process be expanded to allow for more involvement from RWPGs and for the use of higher quality local data, where available. In particular, the LERWPG feels that some of the TWDB per capita water use and population projection data are over-estimates and that the planning process would be improved if the planning group is able to revise these data. Additionally, the LERWPG would like to be able to override the TWDB prescribed approach when justified.

In the previous planning cycle, the LERWPG recommended that the planning process be reviewed by a representative stakeholder group made up of planning group members from across the state, leading to revisions to better capture region-specific characteristics as part of the planning process. The LERWPG appreciates that the TWDB has convened this recommended group in this planning cycle.

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8.3.5 Right of Capture and the Common Law Doctrine of Groundwater Ownership

The LERWPG supports the Rule of Capture, as modified by the rules and regulations of existing underground water conservation districts, and the Common Law Doctrine of Groundwater Ownership. The planning group also supports the state's policy that groundwater conservation districts (GCDs) are the preferred method of managing groundwater and supports the creation and operation of GCDs that are organized and function under Chapter 36 of the Texas Water Code (TWC). Accordingly, the planning group urges the Texas Legislature not to empower the RWPGs with any water management or regulatory authority.

8.3.6 Playa Best Management Practices

The LERWPG supports and encourages the development and voluntary use of BMPs to improve recharge and protect playa basins from siltation, including creating and preserving native grass buffers on land surrounding playas to maintain their water holding capacity.

Of the roughly 80,000 playas in the Great Plains states, about 15,500 are located in the Llano Estacado Region. Within the Panhandle Region, these ephemeral basins could appropriately be called recharge wetlands as they are strongly tied to the Ogallala Aquifer.

One example of a voluntary program directed at rehabilitating altered playas is the Texas Playa Conservation Initiative (TxPCI) that is proving successful in recovering altered playas and augmenting recharge.

Don Kahl, Region 1 Migratory Gamebird Specialist with the Texas Parks and Wildlife Department (TPWD) in the City of Lubbock, is working diligently with TxPCI to restore altered playas to fulfill their role in the water cycle. Healthy playas ensure recharge of clean water into the Ogallala Aquifer. The recharge rate through playas is 10 to 100 times greater than elsewhere. Water that is filtered through playas most benefits wells pumping from the Ogallala Aquifer. Three inches of recharge through a 4-acre playa produces 326,000 gallons of returned water. That is enough to support 2 years of residential use for a family of four, according to Kahl.

> *"Water recharged through playas stays localized where the playa lies. Recharge can range from an inch or less up to 20 inches. The average playa is 17 acres, so that's considerable water recharged from an average-sized playa—far more if the recharge rate is on the high end of up to 20 inches,"* Kahl projected.

The health of the Ogallala Aquifer is a major concern on the Texas High Plains, where massive historic declines in the freshwater aquifer have occurred due to heavy irrigation and residential use. Land use patterns in agriculture and urban sprawl have both had substantial impact on playas' function.

Kahl says Texas has a total of 23,037 playas. Of that number, 4,080 are currently categorized as pristine--functional thanks to a good grass buffer around them, no trenching, and no accumulated silt in the basin. Another 5,631 are currently listed as functional but at risk, and a troubling tally of 13,326 playas are categorized as not functional.

Kahl's work with TxPCI, launched in 2015, seeks to rehabilitate playas listed as not functional. Others partnering with TPWD in the effort include the Playa Lakes Joint Venture, Natural Resources Conservation Service (NRCS), Ducks Unlimited, Texan by Nature, USFWS, and Ogallala Commons.

> *"Our focus is on backfilling tailwater pits in grass-buffered playas. A hole in the clay pan of a playa, such as a tailwater pit, is a hole in the playa's filter mechanism. Water gathered in a pit is not productive like rainwater spread shallowly over a whole playa basin. With pits, you lose the shallow water habitat,"* Kahl says.

Kahl says TxPCI uses satellite imagery to identify potential projects and collect landowner information. Once they have identified a playa they would like to restore, TxPCI directly contacts the landowner. The initiative pays 100 percent of restoration costs and hires and directly pays contractors involved in pushing berms alongside tailwater pits back into the pit. Playa landowners receive a one-time incentive payment of $80 per playa acre and must enter into a 10-year agreement that precludes future pit creation in the playa. Playas that get pit backfilling are remotely monitored.

The initiative has projects in Castro, Floyd, Swisher, Briscoe, Hale, and Armstrong counties thus far, and as of spring 2024, had completed x pit filling projects with x playa acres restored. To date, TxPCI has spent an average of $xx,xxx per project. "That's pretty cheap for wetland restoration," Kahl said.

Primary funding for TxPCI is via migratory gamebird funds through TPWD, federal and North American Waterfowl Conservation Act grants, and regional grants from USFWS.

> *"This effort shows that water conservation goes beyond what you do in your household. It's important to realize where your water comes from, and the important role that playas play in keeping Ogallala Aquifer water available," said Kahl.*

Enhanced Recharge

Dr. Chris Grotegut, an agriculture representative on the LERWPG, and a local veterinarian, farmer and stockman in Deaf Smith County, likens playas to "an irrigation farmer's best friend" where recharge of the Ogallala Aquifer is concerned. His stewardship has shown that playas enhance recharge under a limited irrigation scheme.

> *"We've seen that where Ogallala wells recover the best from recharge is around our largest functioning playas. When rains are good and playas are holding water, the water table is steady."*

8.3.7 Control of Invasive Species

The LERWPG supports implementing brush management and controlling invasive aquatic vegetation as water conservation practices, and particularly supports and encourages the efforts by the Canadian River Municipal Water Authority (CRMWA) and City of Lubbock to control salt cedar as a means to increase water flow to the reservoirs for water supply and environmental purposes. Further, the LERWPG encourages similar controls be applied to other watersheds regionally, including those of Lake Mackenzie and White River Lake. The LERWPG also supports controlling invasive aquatic species, such as zebra mussels, quagga mussels, golden algae, milfoil and hydrilla,

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giant salvinia, and water hyacinth that have the potential to negatively impact the state's lakes, reservoirs, and existing infrastructure.

8.3.8 Protection of Springs and Seeps

The LERWPG supports the voluntary protection of springs and seeps as they exist within the region and encourages landowners to use BMPs to protect and maintain these important water resources for not only their practical value for livestock and wildlife, but as aesthetic resources as well. As addressed in past appendices to LERWPs, there are some remnant spring and seep sites across the region that can experience renewed flow in instances of strong rainfall.

A key to the continued life of springs and seeps in the Southern Plains region is maintaining soil health on both farmlands and rangelands across the breadth of the Llano Estacado Region. This is a voluntary measure on the part of landowners, but where soil health is sufficient for the maintenance of improved organic matter in the soil, the ability of the soil to absorb water is greatly enhanced, as further described in *Springs and Seeps of the Llano Estacado Region* prepared by LERWPG member Jim Steiert and included as Appendix I.

8.3.9 Voluntary Water Transfers

The LERWPG supports voluntary water transfers between willing buyers and sellers, but stresses that the governing bodies of each involved party would have to agree before any potential connections and/or transfers could be made.