



## Colorado River Land Analysis

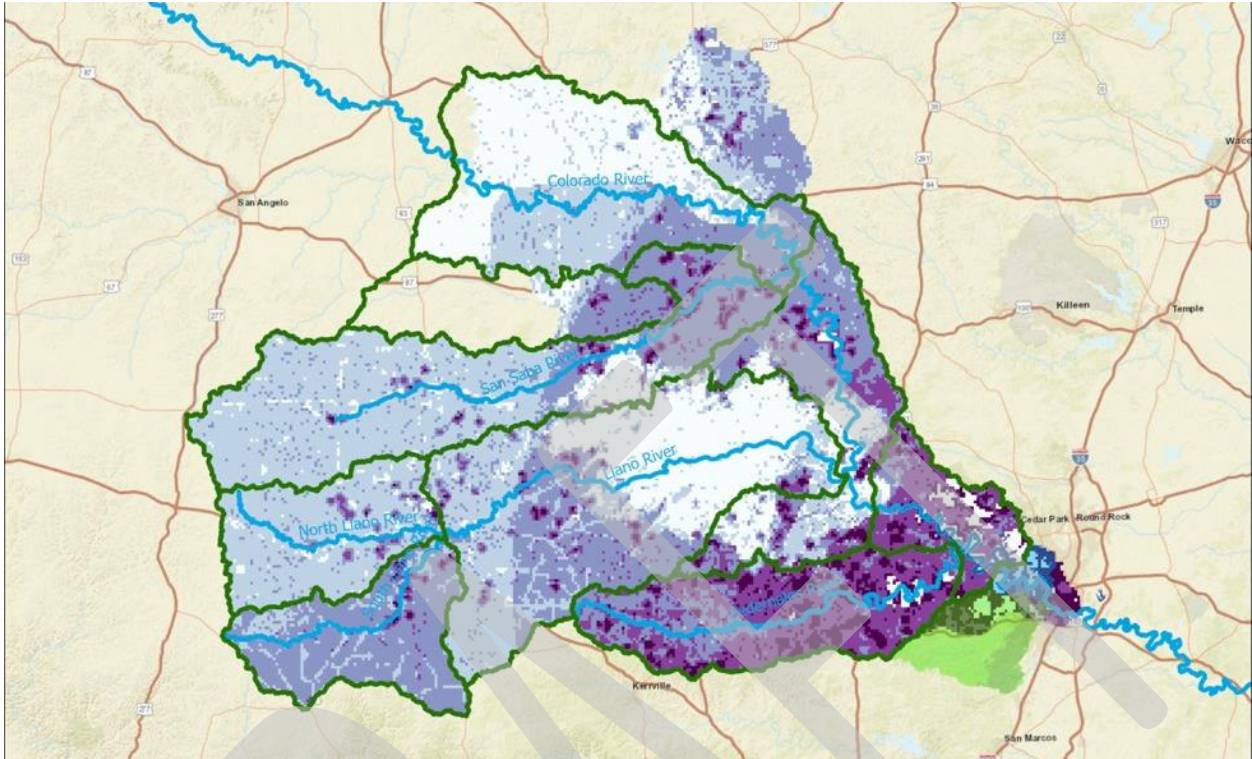
Austin's drinking water supply has benefited from a landscape of rural, largely working lands throughout the Highland Lakes' watershed. However, land use in Texas is changing rapidly as the state's population grows. According to Texas A&M Natural Resources Institute, the 20 counties in the lower Colorado basin have seen an 87% increase in population and the loss of over 108,000 acres of working lands since 1997. The working lands that remain are increasingly being subdivided into smaller and smaller parcels. These trends are likely to continue, emphasizing the need to plan for upstream water quality protection.

Source Water Protection refers to the management of areas through which water travels and the regulation of activities on these lands to prevent pollution and contaminants from entering public drinking water sources. The quality and quantity of a city's drinking water supply, as well as other water bodies used for recreational, environmental, and drainage purposes, can be influenced by both natural and human activities. One of the most effective ways to protect source water is to acquire land over which the water flows or to restrict development on such land through conservation easements or other mechanisms. These protections allow the land to continue acting as a natural filtration system for water as it enters water sources, preventing additional contaminants from development activities.

Austin Water conducted the Colorado River Land Analysis to evaluate areas in the lower Colorado river basin upstream of Austin and rank land protection opportunities based on water supply and environmental factors. Water supply factors included stream flow, spring location, recharge zones, and location of undesirable features such as oil and gas wells. Environmental factors included vegetation, slope incline, impervious cover, protected land, and riparian and flood plain areas. This analysis was done with the use of geographic information systems (GIS) mapping tools to overlay these factors and identify priority areas. The results of this analysis are shown in the image below, with darker purple areas (680,000+ acres) indicating areas that contribute most significantly to water quality and quantity based on the evaluated factors.

Further analysis and engagement is necessary to define specific conservation priorities and levels of investment for Colorado River protection. Austin Water will engage community stakeholders, the Watershed Protection Department, and other partners in further refining this analysis. This will involve identification of more discrete conservation priorities using a weighted analysis of economic and equity factors, available partnerships, environmental and water supply impact, and other considerations. Austin Water staff will then define preferred land protection strategies, program designs, and levels of investment that will maximize land protection in these priority areas.

Further discussion of these strategies and program designs is included in the Land Conservation Strategies section below.



Colorado River Land Analysis Study Area, higher priority conservation areas shown in darker shades of purple



## Land Conservation Strategies

Water Forward 2024 includes a review of strategies that protect Austin's source water quality and quantity through land management and land protection practices. These strategies are in addition to, and work in concert with, the ongoing work of Austin Water's Wildland Conservation program. Additionally, Austin Water collaborates with the City's Watershed Protection Department and Parks and Recreation Department on streambank restoration, creek water quality protection, and flood risk mitigation, as well as day-to-day land management for environmental outcomes. The strategies below represent both investments into Austin Water's current land protection programs and future opportunities to expand these programs upstream.

### Austin Water's Wildlands

Austin Water currently protects over 48,000 acres of land through its Balcones Canyonlands Preserve (BCP) and Water Quality Protection Lands (WQPL) programs. Managed by the Wildland Conservation Division, these lands protect portions of the Lake Austin and Lake Travis watersheds for endangered species habitat, and areas over the Edwards Aquifer recharge and contributing zones for the long-term resilience of the Barton Springs segment of the Edwards Aquifer. Since its inception in 1998, the Water Quality Protection Lands program has been bolstered by five voter-approved bonds, totaling around \$230 million, with an additional \$24 million from partnerships. As part of this initiative to protect its source water, the City of Austin set a goal to keep overall impervious cover below 10% within the Source Water Protection Area, which includes the Barton Springs Edwards Aquifer Recharge and Contributing Zones. To help achieve this goal, it is estimated that the City of Austin would need to permanently protect approximately 100,000 acres of land. As of 2024, the City of Austin has been able to acquire permanent protections on approximately 34,000 acres of land under the WQPL program.

Austin Water will continue to protect current and future water supplies through the active management of these Wildlands. Austin Water will also continue to pursue further additions to the Water Quality Protection Lands and Balcones Canyonlands Preserve that meet those programs' land protection priorities.

### Colorado River Land Protection

As described in the Colorado River Land Analysis section above, the purpose of the Colorado River Land Analysis was to evaluate how Austin Water could further protect and preserve areas that contribute to Austin's drinking water quality and water quantity in the lower Colorado River basin. Future land conservation efforts upstream of our drinking water intakes could prevent water quality impacts associated with development of impervious surfaces and intense land uses. This protection would not only provide good stewardship of our surrounding natural and working lands, but also help protect water quality and lower costs associated with treating water now and in the future. These lands upstream of Austin represent a future opportunity to implement the types of land conservation and best management practices that have been successful under Austin Water's current land protection programs.

This Water Forward recommendation of land conservation strategies to protect our drinking water supply is just one component of the City of Austin's long term land conservation planning. Multiple City departments will also be working together to define land conservation strategies and funding mechanisms to meet multiple community goals.



Austin Water will continue to identify important areas of land and work to conserve those natural resources for future generations. The following conservation strategies are being considered by Austin Water to help protect the City's water supply in the lower Colorado basin:

Austin Water will consider purchasing some of these lands outright. While this will allow Austin Water to have complete control of a property, it is also the most expensive option due to the cost of the land and yearly costs to manage the property to protect natural resources.

For some land areas, Austin Water will consider purchasing conservation easements. A conservation easement is a strategy where the utility purchases the development rights to a property from the landowner, preventing future development of the property while allowing for continued ranching or other land uses by the landowner. This strategy is less costly than purchasing the land outright, but Austin Water still has responsibility for overseeing and enforcing the associated development restrictions. Sometimes, the City can partner with a non-profit organization to manage the conservation easement. There is less AW cost associated with these partnerships if the partner takes the lead on monitoring the property for compliance with the terms of the easement.

Similar to a conservation easement, the City may also elect to pay some landowners directly to manage their property for environmental or water supply/quality outcomes. In this strategy, rather than purchasing the development rights, the City would pay the property owner to manage the property in accordance with the terms of an agreement. This strategy would require additional staffing resources to advertise funding opportunities, manage payments to landowners, monitor properties for compliance, and evaluate program outcomes.

Austin Water will also continue public education and outreach to landowners on land management best practices. While this strategy may cost the least, the cost can vary depending on how many engagement activities are created by Austin Water. Using creative and interactive ways to educate the public about land conservation and stewardship, source water protection, stream bank protection, native plants, watershed protection, and flood response and preparedness will help foster personal connections to landowners and local community organizations working to protect their natural resources.

Austin Water will continue to engage the public and community regarding these land conservation strategies, considering combinations of the strategies in different priority areas, and will continue the important work of protecting the natural environment and our water supply sources. Determining an appropriate and effective mix of strategies to meet land protection goals will require further engagement with the public, key stakeholders, and other City departments. As described previously, Austin Water will continue to define its land protection priorities for the water supply watershed and determine appropriate land protection strategies in different priority areas. Given the geographic extent, significant opportunities exist to collaborate with other governmental, civic, and land conservation partners. These partnerships open opportunities to leverage City resources, expand the geographic scope of our work, and more effectively promote land management practices.

Austin Water will also continue to evaluate the most appropriate funding levels and mechanisms to meet identified land protection goals. Today, Austin Water stewards a network of Wildlands that reflect an investment of over \$275 million over 20+ years, using a variety of sources. The Colorado River Land Analysis provides a compelling target for future land protection efforts for the benefit of water, wildlife, and people.