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Riparian Areas Boost River Flow

A clean and reliable water supply is arguably the most important natural resource worldwide. Texas’ naturally arid climate, extreme weather conditions, growing population and economy have made planning for future water needs a primary issue at the state and local level. The current Texas State Water Plan outlines \$80 billion of water supply projects to help meet increasing needs over the next 50 years. Strategies include conservation, new reservoirs, desalination, infrastructure improvements, rainwater harvesting, and even cloud seeding.

Apart from household conservation and rainwater harvesting, the majority of these strategies are in the hands of industry, government, and agriculture. However, since more than 94% of Texas land is privately owned, there is enormous potential for individuals to play a role in enhancing water supplies through land management. One example is by protecting and increasing riparian areas.

The riparian area is a band of dense, native vegetation along a body of water. This zone can be identified by high soil moisture, frequent flooding, and the unique collection of plants and animals found there. Riparian areas also provide numerous beneficial functions that support a healthy environment including increasing flow in the accompanying waterway.

The “riparian sponge” is a term used to describe a properly functioning riparian area that has the capacity to store water in the land adjacent to the waterway and slowly release it over time. When rivers and creeks are bordered by land covered with a variety of trees, shrubs, and grasses, that means they are also bordered by rich soil. When flood waters flow over the banks into a healthy riparian area, the vegetation slows the water down allowing sediments and nutrients to be trapped which will nourish the plants and keep the riparian area stable and healthy. As the flood water slows down, it also soaks into the thick soil layer supporting the riparian vegetation. After normal flow conditions return, the riparian sponge slowly seeps water back into the river or creek for continuous flow between rain events. Minus a healthy riparian sponge, sediment laden water races off the land and down the stream channel without the possibility of being stored.

Protecting and increasing your riparian sponge starts with managing the types and quantity of vegetation. Changes in grazing or mowing practices, limiting animal access through fences, or simply leaving the land alone can help improve a riparian area’s ability to filter runoff, stabilize banks, lessen flood impacts, support wildlife populations, and store water.

If you are lucky enough to manage property along a waterway, you have an opportunity through land management to boost stream flow for your own benefit and everyone downstream. I encourage you to learn more about riparian areas and how to manage them by visiting the Education Center section of the UGRA website (www.ugra.org/public-information/education).

Let’s Keep Our River Clean

Shelby Taber, Natural Resources Manager for UGRA, staber@ugra.org or (830) 896-5445