

SAN ANTONIO WATER NATURALLY

Background Information

Bexar County falls into three distinct eco-zones: The Blackland Prairies, South Texas Brush Country and Edwards Limestone (Edwards Plateau).

BLACKLAND PRAIRIES

The Blackland Prairies are found from the Dallas/ Fort Worth area, across to Bryan/College Station and down to eastern San Antonio. Throughout history, the black soil of these prairies supported tall grasses. Trees were sparse and limited only to the limestone creeks and streams.

Today, the rich soil of the Blackland prairies have been greatly beneficial to the farming community. Unfortunately, farming and over grazing have also substantially decreased the amount of prairie grasses that still remain. Since range fires are rare today, the trees are no longer just confined to the creeks and streams as they once were before settlers arrived. Invasion of woody plants on the remaining grasslands such as Ashe Juniper (cedar), Oaks and Texas Redbuds are a major influencing factor on wildlife of this region. Shrublands, in general, are better for animals like white-tailed deer, bobwhite quail, and many species of rodents. However, grassland species such as pronghorn antelope, Attwater's prairie-chicken and meadow-larks suffer as grasslands are replaced by brush.



SOUTH TEXAS BRUSH COUNTRY

(Southern Bexar County)

Because of the low amount of rainfall, this region does not support an abundance of tall trees. When the Spanish arrived in this region in the 1600s, they found an area of almost treeless prairie grasses and tall wild flowers. Among this beauty were clumps of spiny mesquite trees and prickly pear cactus. As with the Blackland Prairies, trees were found only along creeks and rivers. With few prairie fires and intense grazing, increased cactus and mesquite took the place of the grasses and the area became a brush land.

Today the areas of the sometimes impenetrable brush country support a rich diversity of wildlife such as rattlesnakes and bobcat and plants like huisache and Texas persimmon.



EDWARDS PLATEAU (EDWARDS LIMESTONE)

The Edwards Plateau is marked by a fault line (Balcones Fault) which runs from the western edge of Austin across to the northern & western edge of San Antonio/Bexar County. The Blackland Prairies are its neighbor to the south.

The rugged plateau lies just above the Edwards Aquifer which feeds clear streams such as the San Antonio, Comal and San Marcos Rivers. Historically, these spots became the focal points of settlement in this region but today, they are the focal points of tourism.

The area is rich with an abundance of deep limestone canyons and networks of underground caverns. Spanish Oaks, Mesquites and Ashe Juniper (also known as cedar), help define the characteristics of the area most people refer to as the Texas Hill Country. During springtime, the Texas Bluebonnets mix with thousands of other red, orange and pink wildflowers making the area famous for Sunday Spring drives.



UNIQUE FAUNA OF THE REGION

The San Antonio/Bexar County area has an abundance of interesting and unusual wildlife found within the three eco-zones. Some of these include:

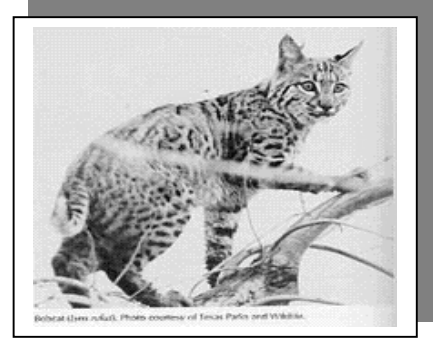
Nine-banded Armadillo

This state mammal of Texas is a cat-sized, insect-eating mammal. The armadillo's bony, scaled shell protects it from predators. Many homeowners are aware of the armadillo's ability to dig. It digs many burrows as well as digs for food. Although these holes may cause a problem for human yards and gardens, many other wildlife species use these burrows once they are abandoned. The armadillo can be found in all but the western Trans-Pecos portion of Texas in a variety of habitats; brush, woods, scrub and grasslands.



Bobcat

The bobcat is a medium-sized, short-tailed, reddish brown or grayish cat. Although the bobcat occupies a wide variety of habitats in Texas, they prefer rocky canyons or outcrops. In areas where such conditions don't exist (such as the South Texas Brush Country) they use dense thickets for protection and dens.



They are active largely at night although they frequently leave cover and begin hunting long before sundown.

Openings in canyon walls, rock piles or dense underbrush are favorite places for the cat to den. Occasionally, the bobcat climbs trees for refuge.

The bobcat's main diet consists of rats, ground squirrels, mice, and rabbits. Deer are occasionally killed and eaten, as are domestic sheep, goats and poultry.

Northern Mockingbird

The state bird of Texas is the most widely-known songbird in America. It's singing abilities are highly regarded. In addition to its 50 call notes, it can also expertly mimic sounds such as that of a barking dog, notes from a piano and even a cackling hen.

Mockingbird nests can be found one to 50 feet above the ground in the fork of a tree or on the branch of a bush. Like many other songbirds, mockingbirds feed on fruits and insects. Mockingbirds are especially aggressive regularly attacking starlings and grackles and even cats if they feel threatened.

Mockingbirds live all year across Texas visiting lawns and gardens in urban and rural environments as well as edges of open woods, farmland, streamside thickets and brushy deserts.



Brazilian Free-Tailed Bats

The Brazilian Free-Tailed Bats live in caves of the Balcones Escarpment and the adjacent Edwards Plateau. The total population of these bats that inhabit Texas caves during the summer has been estimated at 95-104 million with the largest colony being found in Bracken Cave near San Antonio. This cave is thought to hold between 20 and 40 million bats. The bats spend much of the winter in areas such as Mexico, Central America or even South America before returning to Texas when the temperatures become warmer.

The main diet of the bat consists of insects. The huge summer colonies of these bats have a great impact on nearby insect populations eating an estimated 6,000 to 18,000 metric tons of insects annually in Texas.

Fire Ant

Accidentally introduced from South America in the late 1930's, the fire ant has negatively affected wildlife and overall biological diversity since it entered Texas in 1957. Young wildlife have been especially vulnerable to this aggressive pest. Numerous incidental observations of fire ants attacking and killing wildlife have been reported.

Negative interactions between people and fire ants often become more frequent as the ants move into "people places" seeking moisture. The fire ant is an aggressive pest and during a drought situation may be more likely to damage gardens, yards, homes and other structures in search of water. It is estimated that homeowners in urban areas spend around \$10.5 million a year on controlling fire ants. They spend an estimated \$7.9 million annually on medical treatments due to fire ant stings.

There are many ways to manage the fire ant problem. Pouring hot water on the mounds, using insecticide mound drenches and spreading insecticide granules approved for fire ants are just a few of the methods used to rid homes and yards of this problem in the San Antonio region.

UNIQUE FLORA OF THE REGION

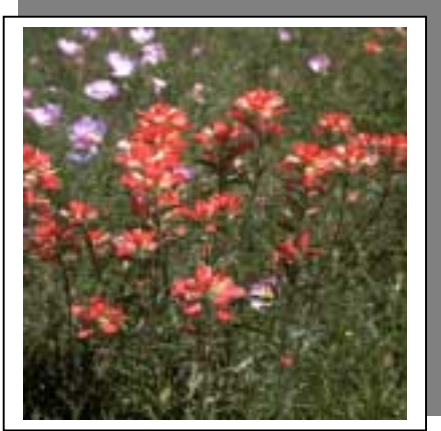
The Bexar County/San Antonio region has a variety of unusual plants. Some of the more common ones include:

Wildflowers

Wildflowers have not only become a "tourist attraction" during the Spring, but they are also very popular in people's gardens. In the San Antonio region, native wildflowers benefit the local water supply. Native wildflowers require little water, no fertilizer and can be planted in areas of full sun. Once the seeds are sown, very little maintenance is required to have a healthy and beautiful yard.

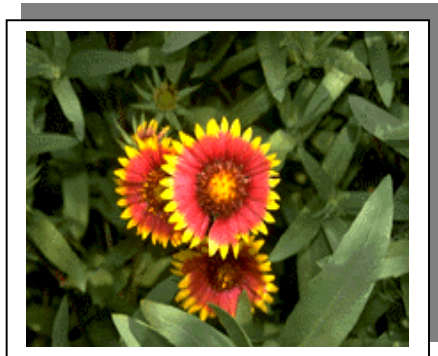
They also help to keep surface water clean. Runoff from backyards can carry excess fertilizers, pesticides and pet wastes to nearby creeks and rivers. Wildflowers act as a filter by slowing the flow of water and trapping these pollutants before they reach waterways.

Bluebonnet- In 1901, the Bluebonnet became the State Flower of Texas. The plant is used by the Texas Department of Transportation extensively in its roadside beautification program and as erosion control. It blooms from March to May and has a usual height of 1 foot.



Texas Paintbrush- The Texas Paintbrush is a member of the Figwort Family. The plant prefers well drained soil in full sun. It is widely believed that this flower feeds off the roots of grass. It's usual height is 6 - 12 inches.

Indian Blanket, Firewheel- This one foot tall, red and yellow flower blooms from May to September. It does well in full sun and well drained soil. Indian blanket is used for erosion control because it establishes so quickly.



Mexican Hat- The Mexican Hat is one of our most common flowers. The red, yellow, orange and brown flowers bloom from March to November and can grow from 1 to even 4 feet tall.



A “NATURAL TEXAS” LANDSCAPE: XERISCAPING/WILDSCAPING

With water being such a hot issue in Bexar County, citizens are beginning to seriously practice landscaping around the home while thinking about conserving water. Currently, as much as 40% to 60% of water used is for maintenance of yards.

A process called Xeriscaping is also important for the outdoors. Xeriscape (“zeer uh scape”) is a word coined in 1981. “Xeros” is a Greek word that means “dry”. The word “xeriscape” means landscaping that reduces the need for water. This is important because it can cut down the amount of water needed on lawns, trees, gardens, and ornamental plants especially during the dry season.

All plants need water, but different plants have differing requirements for it. Considering that people often use utility water to water landscapes, it makes sense both practically and economically to choose plants that are adapted to our locales’ normal rainfall and temperature ranges. In those areas, it is especially important that landscapers choose native plants that thrive without a lot of watering.



Using native plants also may attract a variety of wildlife. Hummingbirds, for example, are attracted to red tubular flowers like red salvia, coral honeysuckle and cardinal flower. Food, water, shelter and space make up a Texas Wildscape. By using elements such as feeders, birdbaths, nest boxes and native vegetation, people can provide places for birds and small mammals to feed and drink, escape from predators and raise their young in the comfort of yards and gardens.

1. Planning and Design

How do you use your yard? For recreation? For looks? What kind of look are you going for?

2. Use Turf Appropriately

Choose low water requirement turf. Long, narrow strips of turf should be eliminated.

3. Irrigate Efficiently

Hand watering is preferable. Group plants according to water usage.

4. Conditioning Soil

Soil should be generally crumbly to the touch. Well conditioned soil promotes water conservation by absorbing water more efficiently. Bare soil should be covered with mulch.

5. Mulching

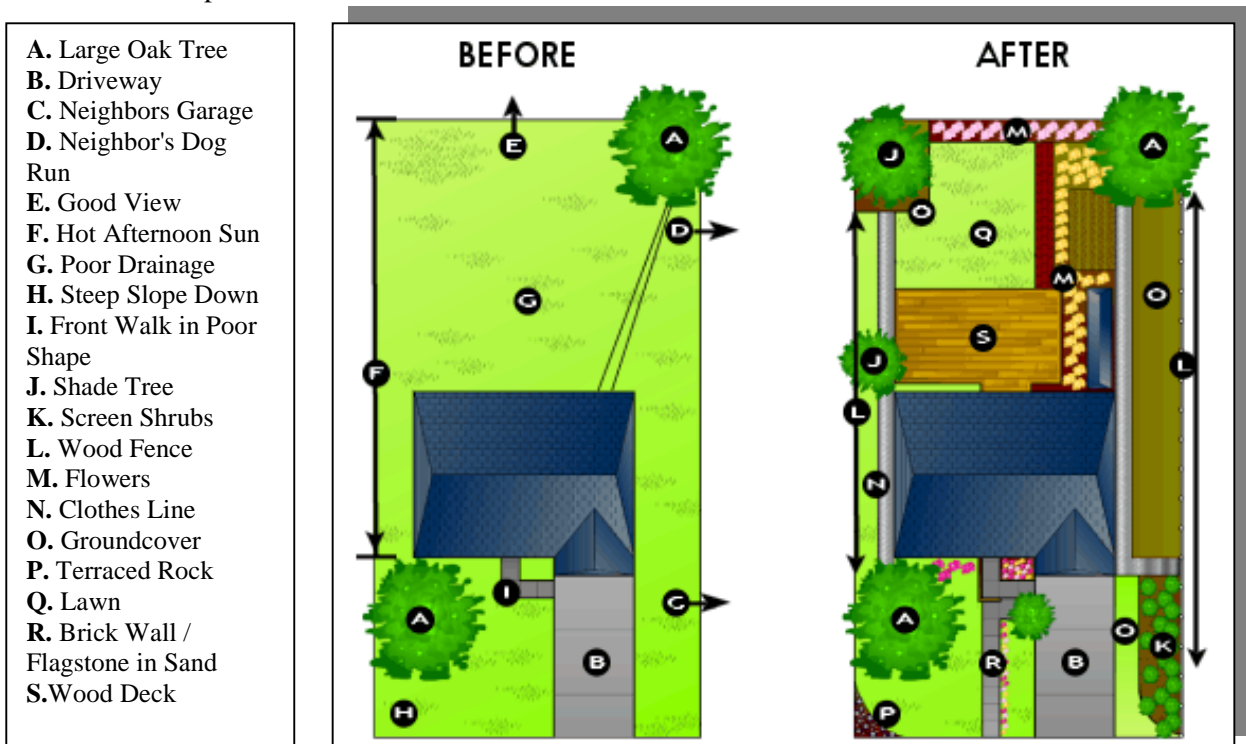
Apply 2-4 inches deep. This minimizes evaporation, reduces weed growth, and slows erosion.

6. Plant Selection

Choose plants suitable to the South Central Texas Climate.

7. Maintaining Landscapes

Proper planning and design reduces maintenance time. Using native plants reduces the need for fertilizers and pesticides.



MITCHELL LAKE: A LOCAL BIRDING PARADISE

Early maps of the Camino Real, one of several highway routes used by the Spanish and other early European settlers who crossed present day Texas, clearly indicates a divergence around an impassable area where Mitchell Lake is located. These maps date from the 1690's.

In a map drawn for Captitan Don Luis Antonio Menchaca dated 1764, the area known today as Mitchell Lake is labeled as a legunilla. These lands once belonged to Mission Espada and were the site of the stables. These maps are evidence that this area was historically a natural body of still water.

In the late 1800's, the site was owned by the Mitchell family and was popular for waterfowl hunting. The marshy setting provided a quality riparian habitat. Shortly after the turn of the century the lake was purchased by the City of San Antonio and a dam was constructed to create one of the earliest centralized wastewater treatment facilities for the city.

As one of two large bodies of still water in South Central Texas, Mitchell Lake and its wetlands are seen as critical habitat for a variety of bird species which migrate along the Central Flyway.

Mitchell Lake was designated as a refuge for shore birds and waterfowl by the San Antonio City Council on February 8, 1973 at the urging of local bird enthusiasts which long knew the importance of this critical wetlands habitat.

Mitchell Lake and the associated wetlands are located along the Central Flyway where birds migrate between Canada and Central America. Maps and written accounts dating from the 1690's indicate that Mitchell Lake has historically been a place of still water where migrating flocks can feed, rest and breed.

Mitchell Lake Wetlands restoration began in earnest the Fall of 1994 when SAWS installed pump stations and began pumping water from Mitchell Lake into the series of decant basins and polders which were once receptacles for the city's waste water sludge.

Bird watching at Mitchell Lake has reveled the presence of over 300 species of birds, including endangered species. The Mitchell Lake Wetlands have long been a well kept secret among the bird watchers who come from all over the world in hopes of catching a glimpse of bird species to add to their life lists.

Birds that have been spotted include:

Avocets	Belted Kingfishers
Black-neck Stilts	Caracaras
Dowitchers	Giant Blue Herons
Golden-fronted Woodpeckers	Great Egrets
Grebes	Hummingbirds
Northern Shovelers	Ospreys
Owls	Quail
Ruddy Ducks	Roseate Spoonbills
Snowy Egrets	Spotted Sandpipers
Vermilion Flycatchers	White-faced Ibises
White Pelican	Willetts
Yellow-billed Cuckoos	Yellowlegs

CONCLUSION

For perhaps thousands of years, man has passed through or settled in this region because of the vast and varied amount of natural resources available. From Mitchell Lake with its flocks of migrating birds, to forests of juniper and 100 year old live oaks, the San Antonio/Bexar County region's natural resources have played an important role in the development of this community's identity.

The cool, clear waters that bubbled forth from springs in the Texas Hill Country must have seemed like a dream to the tired Spanish explorers who happened upon them in the 1500's and 1600's. These same streams today are a recreational dream for the thousands of people who journey to their banks during the hot, dry periods each summer. Caves that served as shelter for early man as well as many species of wildlife are today regarded as vitally important to the well being of a water supply serving almost 2 million residents. Black fertile soil that once harbored immense fields of native grasses and wildflowers are used today for the important agriculture needs of a growing state. Finally, an unspoiled river that attracted settlers and eventually gave birth to a community called San Antonio is today the number one tourist attraction in the state and a vital source of income for the now eighth largest city in the U.S.

In 1843, Frederick Marryat said this about the San Antonio River,

"The temperature of the water is the same throughout the year, and not a single day passes without the inhabitants indulging in their favourite and healthy exercise of swimming, which is practiced by everybody, from morning till evening; and the traveler along the shores of this beautiful river will constantly see hundreds of children, of all ages and colour, swimming and diving like so many ducks."

Although today walking along the riverwalk is favored over swimming, the citizens of the community are still in love with this river. And although some of the natural beauty of the river has been transformed over to "urban jungle", in the future, the river will most likely still be the central focus to a city that refuses to loose it cultural and natural identity.

