

Master Development Plan 2019

Bulverde Oaks Nature Preserve

A Vision for Tomorrow



Green Spaces Alliance of South Texas

See Back Cover For Wildflower IDs

Natural Diversity

Wildness is the preservation of the world – Henry David Thoreau



IDs Read Top to Bottom

Queen Caterpillar on Pearl Milkweed Vine: Pond Hill Loop

Band-Winged Dragonlet: Pollinator Prairie

Green Lynx on Snow-on-the-Mountain: Arrowhead Trail

Bobcat: Recharge Pasture – Trail Camera

Ring-Necked Ducks: The Pond

Coyote: Pond Hill Loop – Trail Camera

Red Admiral on Pincushion Daisy: Arrowhead Trail

Tiger Swallowtail on Juniper: Pollinator Prairie

Variegated Fritillary on Texas Thistle: Bat House Prairie

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Green Anole: On Buckley's Yucca



The property's rich natural history and incredible diversity creates a prime location for the San Antonio community to explore, learn and play.

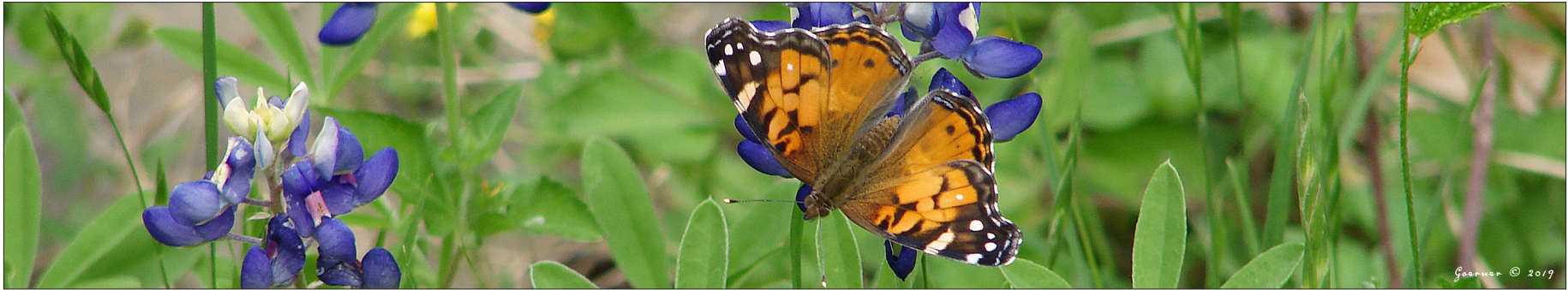
Dedicated to protecting the property's diverse plant and animal communities, our management focus will be for nature.

Surrounded by urban development, an added benefit is 31 acres of environmental education within a short drive.

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*Vision is the art of seeing
what is invisible to others.*

Jonathan Swift



Green Spaces Alliance

Our Mission

American Lady Butterfly
Texas Bluebonnet
Bat House Prairie

To sustain the natural environment and enhance urban spaces through land conservation, community engagement and education.

Our vision is to preserve, protect and enhance a natural part of the San Antonio region for the benefit of the wildlife and vegetation while providing an educational, recreational and rejuvenating experience for humans of all ages. As a local 501(C)(3) non-profit corporation, Green Spaces Alliance has helped protect more than 29,000 acres of sensitive lands over the Edwards Aquifer, safeguarded 458 acres of private prop-

erty as a conservation easement holder as well as 122 acres of donated land, fostered 44 community gardens throughout San Antonio, and educated more than 2,000 students on the importance of nature with our youth photography program. With 16.9 percent of San Antonio's population living below the poverty line (US Census, 2010); Green Spaces Alliance's programming ultimately serves to assist many of those who cannot assist

themselves. In protecting both large parcels of land over the aquifer and smaller parcels within the urban environment, Green Spaces Alliance works to alleviate environmental and economic inequalities, while simultaneously educating the general public and fostering stewardship for our environmental landscapes and natural resources

*Do something that will last
and be beautiful.*

Ken Burns



Red-Striped Ribbon Snake
Pond Hill Loop

History of the Property

Judson Road at Loop 1604

When the Hill Country was settled by European man in the mid-1800s, it was maintained as a grassland savannah largely by grazing habits of bison and antelope as well as by frequent natural and man-made fires. The land supported a rich diversity of forbs and grasses. Cedar was restricted to overgrazed areas along rivers and streams, and in areas of shallow soils and steep canyons where fires did not occur frequently. White-tailed deer were rarely found in the grasslands. With European settlement came fences, cows, sheep, goats and the control of fire. Livestock were continuously grazed in fenced pastures which disrupted the natural movement

patterns of grazing animals. Plants were not allowed to rest and recover from grazing. By 1900, continuous overgrazing and control of fire had taken its toll. The land began to change from a grassland to a brushland.*

Those changes to the lands of San Antonio and the Texas Hill Country have been drastic in the last 150 years. While full restoration to the historic grassland savannahs and water course habitats of the past is admittedly difficult at best, it won't keep us from trying our very best to restore, maintain and protect the lands of South Central Texas.

Green Spaces Alliance of South Texas received

a non-cash charitable contribution from the Capital Foresight Limited Partnership in the form of a 31-acre land donation. On December 17, 2010, Green Spaces Alliance took over the deed to the property that is now known as the Bulverde Oaks Nature Preserve. Historically, this land was used for ranching, but pressure to develop the land has increased with surrounding urban sprawl. Bulverde Oaks Nature Preserve has been spared some of the pressure because of its location on the floodplain. Now owned and managed by Green Spaces Alliance, those pressures have been almost eliminated, and the undeveloped island of nature can continue to thrive.

*Excerpt: TPWD Booklet 7100-002A-10

*We delight in the beauty of the butterfly,
but rarely admit the changes it has gone through
to achieve that beauty.*

Maya Angelou



BONP Today

A 31 Acre Gem in the Rough

Overgrazing and urban encroachment tend to invite a lack of biodiversity, allowing undesirable species to thrive. Fortunately that is not the case here. As one of the only ecologically diverse green spaces in the area, Bulverde Oaks is a unique environment that provides protection for its wide array of inhabitants. The 31 acre oasis is home to 249 plant and 168 animal species.

Honeybees reside in our rescue bee hives. Prairies are being restored to provide shelter and nectar for our pollinator friends.

Habitat is provided for the local bat population in hollow tree stumps and in a man-made bat box. This protected verdant space is home to a wide variety of wildlife species, including wild turkey, deer, hogs, and rabbits; fish, snakes, and lizards;

spiders, insects, and birds; all deep within a city that likely will grow to 3 million residents by 2040. Green Spaces Alliance of South Texas is shaping Bulverde Oaks Nature Preserve to be a sanctuary for the many citizens of San Antonio and opens up this unique site to the public for monthly guided nature tours.

Pond

View from Bonnie's Bird Blind

*Learn from yesterday,
live for today, hope for tomorrow.
The important thing is not to stop questioning.*
Albert Einstein



A Vision For Tomorrow

Preserve. Protect. Educate.

Black Crested Titmouse
on Black Willow
Pond Dam

Bulverde Oaks Nature Preserve will always be managed to benefit the native plants and wildlife that call it home. It is remarkable that such a diverse healthy ecosystem can be found in such an urbanized environment.

The primary intent is to promote this healthy landscape and enable it to continue to thrive no matter what development occurs around it. Invasive species removal will be a constant activity as encroachment advances. Feral hogs and overpopulation of other plant and animal

species will be kept in check with sustainable removal practices. Concurrently, growing conditions for native species will be promoted.

The secondary management goal is to provide a place for the human community to learn, explore and reflect.

To accomplish this, land managers have and will continue to utilize the supportive volunteers and partners that have made the property what it is today, and will welcome new partnerships. Trail assessment and maintenance will warrant year

round availability. Educational opportunities will constantly evolve. Structure and facility maintenance will ensure a clean, safe experience. Stakeholder needs, desires and input will carry on as future opportunities develop.

There is no plan to open the property to public access. However, visitors and groups will be welcomed by appointment, and support partners will have exclusive access throughout the year.

*Imagination is
the only key to the future.*

Ida Tarbell

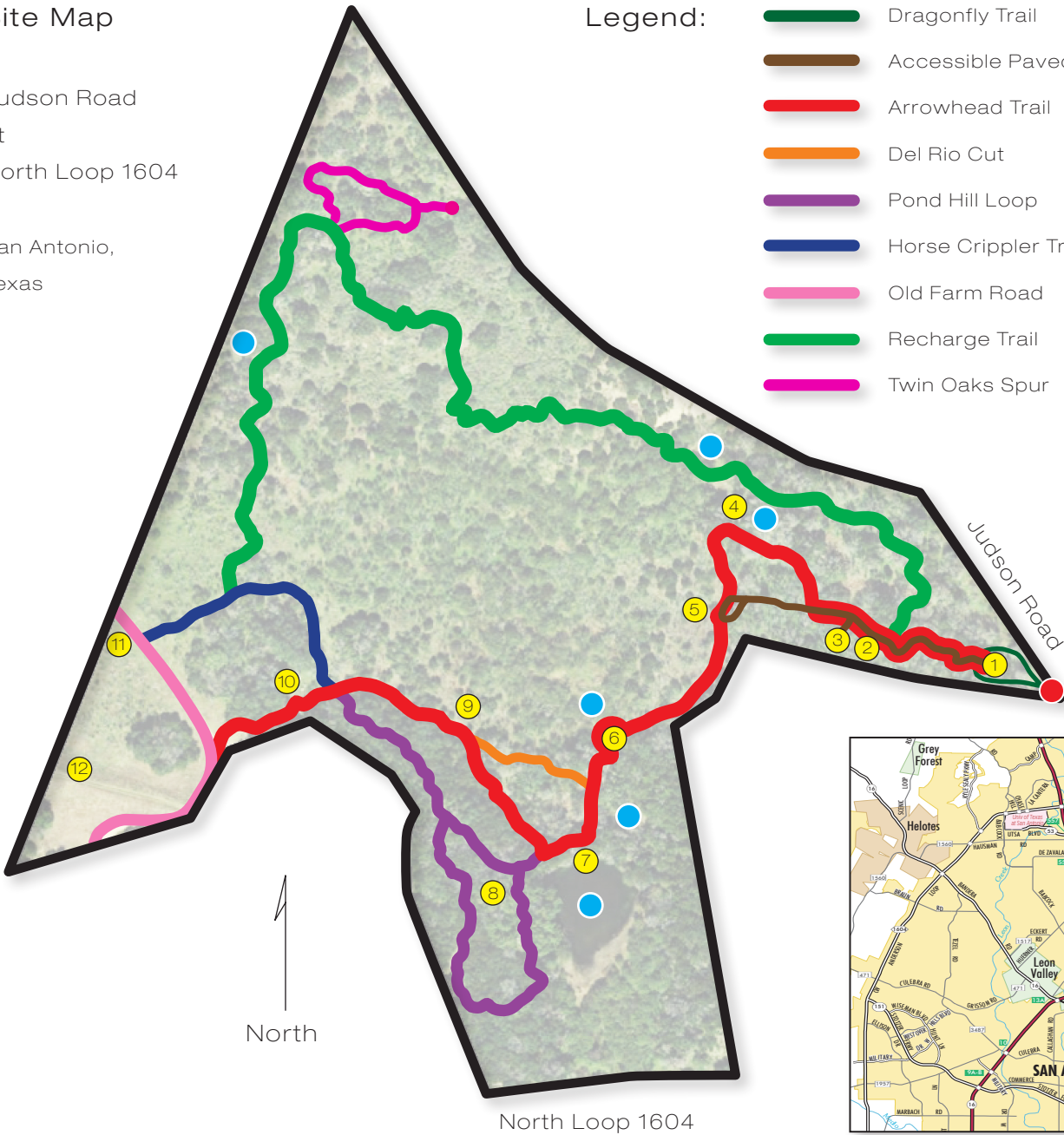
Site Map

Judson Road
at
North Loop 1604

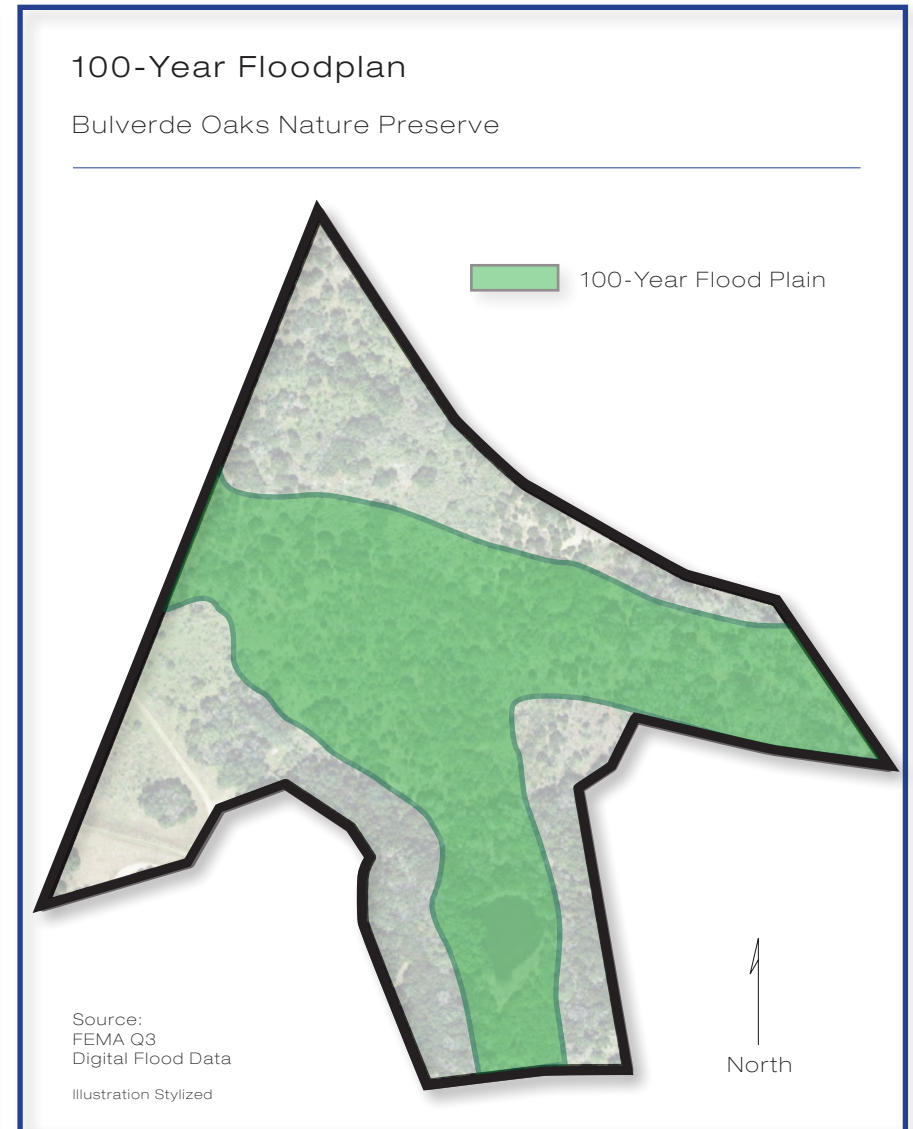
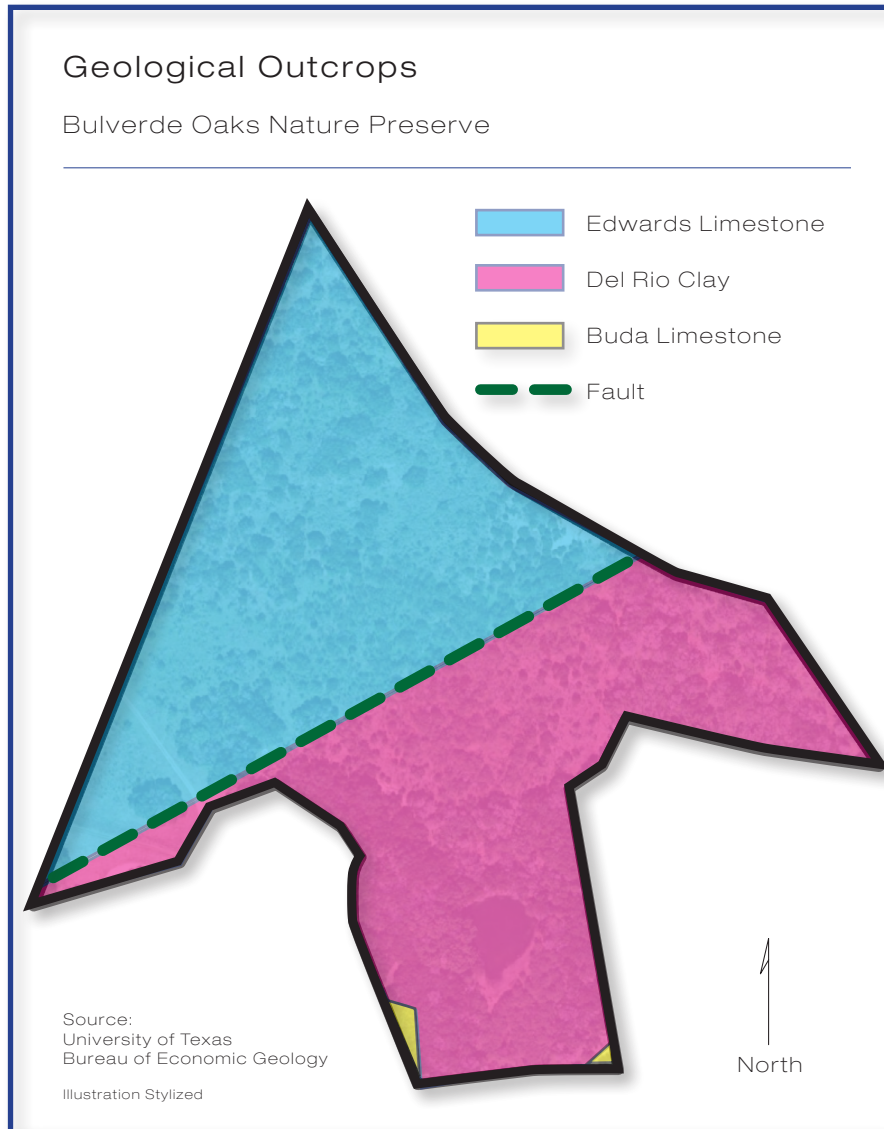
San Antonio,
Texas

Legend:

- Dragonfly Trail
- Accessible Paved Path
- Arrowhead Trail
- Del Rio Cut
- Pond Hill Loop
- Horse Crippler Trail
- Old Farm Road
- Recharge Trail
- Twin Oaks Spur
- Trailhead
- Outdoor Classroom
- Restrooms
- Falling Waters
- Bat House Prairie
- Big Pool
- Bird Blind
- Amphitheater
- Pollinator Prairie
- Corral & Apiary
- Feral Hog Control
- SARA Flood Control Dam
- Special Water Features
- Entrance, Parking & Staging Areas



Supplemental Maps



Data for the maps courtesy of:
Adams Environmental, Inc.

Conservation is a state of harmony between men and land.

Aldo Leopold



Our Institute of Outdoor Learning

Bulverde Oaks Outdoor Classroom

A Short Walk Down Arrowhead Trail

An outdoor classroom and pavilion is a place for instruction, rest, reflection, and group outings. The selected site is in close proximity to the parking lot and trail head, making it easy to access. A University of Texas at San Antonio architecture design studio spent a semester designing and constructing the classroom. The design features many aspects of a valuable outdoor classroom:

- A canopy for shade and protection
- Space for at least 30 people
- A magnetic white board used for instruction or projection of video images
- A storage closet for tools and educational supplies
- Gutters and rainwater harvesting
- Sustainable tread surface

All the while, the design will showcase the students' abilities.

It is a "sculpture," adding an artistic element to the main trail.

The design allows guests to feel part of the woods, not separated.

It offers 360° views of the forest floor and canopy, and the nearby stream.

*Listen to all the teachers in the woods.
Watch the trees, the animals and all the living things...
you'll learn more from them than books.*

Joe Coyhis



Facilities

Aldo Leopold Rest & Reflection Benches

Arrowhead Trail

- Restrooms will enable guests to stay for extended visits. They also make it possible to host groups for education and recreation. The Enviro Loo® is a hygienic, and environmentally friendly sanitation system with very low maintenance. This waterless, odorless, chemical free unit will help conserve water, electricity and peace of mind when nature calls.

- Visitors will clean their hands at a washing station which will be fed from collected and filtered rainwater off the roof of the classroom.
- Various bench styles will be placed throughout the trail system for resting and reflection. Several benches have already been installed by an Eagle Scout.
- An amphitheater style classroom will offer

a perfect view from the hill trail above the pond. Small groups can listen, learn or simply enjoy the view.

- Harvested rainwater will be the only source of clean water. If we wish to upgrade our facilities, municipal water and electricity, either through solar energy or connecting to the grid, is desirable.

*A reconnection to the natural world
is fundamental to health, well-being,
spirit, and survival.*

Richard Louv



Educational

Interpretive Signage

Education is the key human element of our nature preserve. Field trips, curriculum, and learning stops will be useful for guided groups. However, if guests want to enjoy a self-guided hike, there will be plenty of learning opportunities. It will start with a trail head kiosk displaying a map, preserve rules, and the opportunities available. Along the trail will be many breaks with signage to facilitate education and observation.

Topics include:

- Bird viewing
- Wetlands
- Streams and stream-side habitat
- Native and invasive plants
- Grasses, flowers and prairies
- Karst and aquifer recharge
- Wildlife skulls, tracks and scat
- Bats
- Pollinators
- Soil, erosion, infiltration
- Trees and tree rings
- Fossils
- Ethnobotany
- Geology
- Water Features
- Water conservation
- Rainwater harvesting

Prairie Cone Flowers

Old Farm Road

*Study nature, love nature,
stay close to nature.
It will never fail you.*

Frank Lloyd Wright



Educational

Curriculum

Teaching. Learning. Outdoors.
Texas Master Naturalist

When people learn and play in nature, they are healthier, happier and smarter.

Curriculum will be developed as the property progresses as an outdoor learning center and environmental destination and will include lessons for all ages and groups of all sizes.

School, scout, youth, community and corporate groups will be able to choose from a cache of

lesson plans, activities and team building exercises. Digital copies of lessons can be shared with groups prior to their visit. Tools, materials and lessons will be stored on site in the classroom storage closet.

Field trips will be designed to meet specific Texas Essential Knowledge and Skills (TEKS) standards. Specific scout badges can also be earned.

The curriculum can be led by the group's teacher or leader, or special planning between the preserve and the group can allow for the trip to be guided by a Texas Master Naturalist or other ecologically informed educator.

*Those who dwell among
the beauties and mysteries of the earth
are never alone or weary of life.*

Rachel Carson



Accessibility

Location. Parking. Entrance.

Drone Aerial of Bulverde Oaks
North Loop 1604 at Judson Road

The preserve is within a short drive of many citizens of San Antonio and surrounding communities. The north side of San Antonio is one of the fastest growing regions in Texas.

An expanding Hwy 281 is going to invite even more subdivisions. Community populations such as Stone Oak will flourish. This property is already

within a mile drive of over 10,000 residents and there are few other recreational trails or outdoor learning centers in the northeast side of town.

Conveniently located, visitors can find the entrance along the left side of Judson Rd. north of Loop 1604, marked with a welcoming ranch-style gate and cedar fence. Inside the entrance

there is a gravel pad with parking, which can also be used as a group staging area.

Additional parking is found along the roadside. Large groups can organize with us to plan their parking. Groups carpooling and using buses is encouraged. Buses can turn around near the entrance and drop off on the roadside at the gate.

*One touch of nature...
makes all the world kin.*
William Shakespeare



Trail System

Year-Round Access

A Walk into the Heart of Bulverde Oaks

Early Fall Along the Trails

Approximately 2 miles of trails wind through the property. Aside from trimming branches in the corridor, removing vegetation and debris, and keeping a watchful eye on erosion, minimal maintenance is needed on the trails. To keep it that way, bridges, staircases, stepping stones, and drainage will be designed and constructed to

make the hike more enjoyable, limit upkeep, and blend the trail into the landscape. To ensure that opportunities are available for all abilities, approximately 650 ft of accessible trail is planned. Soil cement will ensure a stable, smooth surface. This trail will start at an entrance kiosk, wind through the outdoor classroom and bathrooms,

and swing by one of the restored pocket prairies. The majority of interpretive and educational stations will be located on this first section of trail. For those who want a short, yet informative walk, a small, 400 ft. loop from the parking lot will serve as the "interpretive trail." Over 100 species of plants have been identified along this stroll.

*In every walk with nature,
one receives far more
than he seeks.*

John Muir



Abundance of Water

SARA Flood Control Dam

Elm Waterhole Creek

Beyond Boundaries: The Edwards Aquifer

The Edwards Aquifer is an underground layer of porous limestone stretching from Kinney to Travis County. It is the main source of drinking water for San Antonio. BONP is located on the boundary between the aquifer recharge and artesian zones. The preserve fulfills our entire mission and supports all three of our programs.

Teaching how karst limestone and aquifers work, and how to protect and improve the quantity and quality of water entering the aquifer is a core part of GSA's mission. We are a liaison and team member for the City's Edwards Aquifer Protection Program, helping acquire protections to land contributing to recharge. Another

function throughout all our programs is water conservation outreach and education. Surface water is abundant on the preserve. Additionally, a San Antonio River Authority flood control dam creates a large pond on the adjacent property. All these water features make for incredible habitat and biodiversity at Bulverde Oaks.

*The lakes and rivers sustain us;
they flow through the veins of the earth
and into our town.*

Al Gore



Supplemental Documents

Available Upon Request

Whitetail Deer
Falling Waters - Trail Camera

- | | | |
|---|---|--|
| • Property Use Policies and Procedures | • Boundary Survey and Field Notes | • Bulverde Oaks Up Close and Other Photos |
| • Aerial Maps | • Cost of Improvements List | • Bulverde Oaks 2016 Master Naturalist Album |
| • Edward's Aquifer Zone Map | • Management Plan | • UTSA Management Plans |
| • Karst Zone, Geologic & Soil Type Maps | • Baseline Documentation Report | • General Warranty Deed |
| • Floodplain Map | • Findings from Interviews with Education Practitioners | • General Liability Insurance |
| • Jurisdictional Waters Map | • Environmental Site Assessment (Phase 1) | • Indemnification Form |
| • Easement Map | | • Property Use Application Form |

*The truth of the matter is
that you all know the right thing to do.
The hard part is doing it .*

Norman Schwarzkopf



Acknowledgements

Firewheels
Bat House Prairie

Thank You

Sponsors and Donors:

- Capital Foresight Limited Partnership
- Tesoro
- The National Park Service
- EOG Resources
- Argo Group
- Kimley Horn
- Foresters Financial
- San Antonio Water System
- San Antonio River Authority
- The Gary Family
- Anonymous

Partners & Volunteers:

- Texas Master Naturalists
- Adams Environmental, Inc.
- Land Trust Alliance
- Texas Land Trust Council
- Work Out Help Out
- The University of Texas at San Antonio
- Bexar and San Antonio Audubon
- Bees in the East
- Bright Beam Goods
- Texas Children in Nature
- Texas Outdoor Women's Network

United States Navy

- Boy Scouts of America
- Native Plant Society of South Texas
- City of San Antonio, Parks and Recreation
- DroneDeploy
- Natural Resources Conservation Service
- Texas Parks & Wildlife Department
- Texas Native Trailblazers
- Herb Goerner
- Ron Tullius
- Susan Hughes

*Never doubt that a small group of thoughtful,
committed citizens can change the world;
indeed, it's the only thing that ever has.*

Margaret Mead



Mealy Blue Sage

Base of SARA Flood Control Dam

Board of Directors & Staff

Green Spaces Alliance

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 Carra Garza – Picture Your World Program
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 Zanel Pizarro – Community Conservation
 Coordinator
 Desire Stones – Administrative Assistant

*If you are working on something exciting
 that you really care about, you don't have to be pushed.
 The vision pulls you.*

Steve Jobs



Wildflowers from the Front Cover

Left: Top to Bottom

Cenizo
Recharge Trail

Wild Geranium
Front Entry Along the Fence

Drummond's Skullcap
Dragonfly Trail

Middle: Top to Bottom

Golden Wave Coreopsis
Pollinator Prairie

Cretan Crown Vetch
Arrowhead Trailhead

Lady Bird's Centaury
Pollinator Prairie

Right: Top to Bottom

Scarlet Spiderling
Recharge Trail

Blue-Eyed Grass
Bat House Prairie

Water Primrose
Big Pool



GREEN
SPACES
ALLIANCE
OF SOUTH TEXAS

CELEBRATING OVER 20 YEARS
of Conservation, Education,
& Engagement

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