



City of Garden Ridge

"A way of life, not just a place to live"

AGENDA
WILDLIFE MANAGEMENT ADVISORY COMMISSION
REGULAR MEETING
MONDAY, SEPTEMBER 16, 2019, 6:00 P.M.

The Wildlife Management Advisory Commission will meet in a regular meeting at 6:00 p.m., Monday, September 16, 2019, in the City Council Chambers, 9400 Municipal Parkway, Garden Ridge, Texas. This is an open meeting, open to the public, subject to the Open Meetings Law of the State of Texas. As required by law, notice is hereby posted providing time, place, date, and agenda thereof. The meeting facility is wheelchair accessible and accessible parking spaces are provided. Requests for accommodations or interpretive services must be made to the City Secretary 48 hours prior to this meeting.

1. **Call to Order**
2. **Roll Call**
3. **Pledge of Allegiance**
4. **Wildlife Management Advisory Commission Chair Statement**
5. **Citizen Comment Period – limited to 30 minutes total**

Rules for Citizens' Participation:

The Commission welcomes citizen participation and comments at all Commission Meetings. The Commission offers citizens the opportunity to address them by signing up to speak prior to the meeting. If you speak, you must follow these guidelines:

- a) Respect and courtesy:
 1. Direct your comments to the entire Commission, not to an individual member, nor to the audience.
 2. Show the Commission the same respect that you would like to be shown.
 3. End your speaking at the time allotted below.
- b) Speaking:
 1. First citizen comment period/business item period
 - 1.1 You are required to sign up to speak and you are limited to one 3-minute period.
 2. Second citizen comment period
 - 2.1 You are not required to sign up and you are limited to one 2-minute period.
 3. State your name and address before your comments begin.
 4. You are only allowed to speak once per topic, unless also speaking during a posted Public Hearing.

NOTE: The Texas Open Meetings Act permits a member of the public or a member of the governmental body to raise a subject that has not been included in the notice for the meeting. However, any discussion of the subject must be limited to a proposal to place the subject on the agenda for a future meeting and any response to a question posed to the Commission is limited to either a statement of specific factual information or a recitation of existing policy. Tex. Gov't Code § 551.042.

6. **Business Items**

The following items are for discussion and/or possible action, including recommendations.

- a) Education/Training Session – “Language of Bats in Garden Ridge” by Commissioner McKinney (limited to 30 minutes total)
- b) Approvals
 - i. Minutes for August 19, 2019, Wildlife Management Advisory Commission Regular Meeting.

- c) Discussions/Reports
 - i. Wildlife and wildlife incidents within the City of Garden Ridge.
 - 1. Police Department and Animal Services
- d) Updates/Recommendations
 - i. Review and discuss deer counts including Texas Parks and Wildlife population summary and recommendation.
 - 1. Discuss and make recommendations related to deer management, if needed.
 - ii. Development of comprehensive Wildlife Management Plan for Garden Ridge.
 - 1. Discuss and make possible recommendations regarding topics and/or items in the Wildlife Management Plan for Garden Ridge.
 - iii. Commissioner's Projects
 - 1. Brochure/mailer from New Braunfels (Sullivan).
 - 2. Dedication of the Gardens of Garden Ridge on September 28th, 2019 (Segovia).
 - 3. Health of wildlife in Garden Ridge.
 - 4. Future education/training sessions and Grapevine articles.
 - iv. Meeting Updates/Reports
 - 1. September 4, 2019, City Council Regular Meeting.
 - 2. Parks Committee Monthly Meetings.
 - v. Ordinance No. 210-022018 An Ordinance of the City Council of the City of Garden Ridge adopting board and commission policy and procedures; providing that this Ordinance shall be cumulative of all Ordinances; providing a severability clause; providing a savings clause; and providing an effective date.
 - 1. Receive recommendations and consideration of appointment of Wildlife Management Advisory Commission Chair and Vice-Chair for a one-year term effective October 1, 2019.
 - 2. Discuss and make recommendations related to application of ordinance provisions to commission members, if needed.
- e) Future Agenda Items.
 - i. Commissioner input.
 - ii. Announcement of next Wildlife Management Advisory Commission Regular Meeting (Monday, October 21, 2019, at 6 p.m. at City Hall).

**7. Citizen Comment Period - limited to 20 minutes total
See "Rules for Citizens' Participation" under Item 5.**

8. Adjournment

AGENDA NOTICES:

Decorum Required:

Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

Action by Commission Authorized:

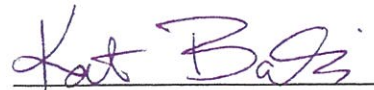
The Commission may vote or act upon any item within this Agenda.

Attendance By Other Elected or Appointed Officials:

It is anticipated that members of the City Council, other city board, commissions and/or committees may attend the meeting in numbers that may constitute a quorum of the other city boards, commissions and/or committees. Notice is hereby given that the meeting, to the extent required by law, is also noticed as a meeting of the City Council, other boards, commissions and/or committees of the City, whose members may be in attendance. The members of the boards, commissions and/or committees may participate in discussions on the same

items listed on the agenda, which occur at the meeting, but no action will be taken by such in attendance unless such item and action is specifically provided for on an agenda for that board, commission or committee subject to the Texas Open Meetings Act.

This is to certify that I, Kat Balbi, posted this Agenda at 9:30 a.m. September 11, 2019, on the bulletin board located at the entrance to the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge.



Kat Balbi
Assistant City Secretary



City of Garden Ridge

"A way of life, not just a place to live"

MINUTES WILDLIFE MANAGEMENT ADVISORY COMMISSION REGULAR MEETING MONDAY, AUGUST 19, 2019, 6:00 P.M.

Commissioners Present:

Chair Cynthia Shanahan-Segovia
Vice-Chair David Krawczynski (arrived at 6:05 p.m.)
Commissioner Ken Kneupper
Commissioner Jeremiah McKinney
Commissioner Paul Sullivan
Commissioner Troy Bippert
Councilmember Lisa Swint, Ex-officio

Commissioners Absent:

Vacant Position

City Staff Present:

Nancy Cain, City Administrator
Marisa Spencer, City Secretary
Kat Balbi, Assistant City Secretary

Other City Councilmembers or Commissioners Present:

Councilmember Kay Bower
Mayor Pro-Tem McCaw
Dr. Jim Miller, Chair, Planning and Zoning Commission

1. Call to Order

With a quorum of the Wildlife Management Advisory Commissioners present, the regular meeting of the Garden Ridge Wildlife Management Advisory Commission was called to order by Chair Segovia at 6:01 p.m. on Monday, August 19, 2019, in the City Council Chambers of the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas 78266.

2. Roll Call: See above.

3. Pledge of Allegiance: Chair Segovia led the Pledge of Allegiance.

4. Wildlife Management Advisory Commission Chair Statement

Chair Segovia spoke regarding the Commission's history, mission, and pro-active approaches taken to support and enhance wildlife in the City of Garden Ridge. She stated the Commission has worked with professionals in order to make informed recommendations to City Council, including partnering with the National Wildlife Federation as a Monarch City.

5. Citizen Comment Period: No one signed up to speak.

6. Business Items

The following items are for discussion and/or possible action, including recommendations:

- a) **Education/Training Session – "Snakes of Garden Ridge: Knowing Your Local Snake Species" by Commissioner McKinney (limited to 30 minutes total).**

Commissioner McKinney reviewed the presentation "Snakes of Garden Ridge: Knowing Your Local Snake Species" (see attached).

b) Approvals

i. Minutes for July 15, 2019, Wildlife Management Advisory Commission Regular Meeting.

Motion: A motion was made by Commissioner Kneupper, seconded by Commissioner Bippert, to approve the minutes for July 15, 2019, Wildlife Management Advisory Commission Regular Meeting. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

c) Discussions/Reports

i. Wildlife and wildlife incidents within the City of Garden Ridge.

1. Police Department

The Commission reviewed the wildlife report from the Police Department.

2. Animal Services

The Commission reviewed the wildlife report from Animal Services.

d) Updates/Recommendations

i. Discuss and finalize schedule for conducting deer counts.

The Commission reviewed and finalized the schedule for conducting deer counts, including the dates and Commissioners for each count.

ii. Development of comprehensive Wildlife Management Plan for Garden Ridge.

1. Discuss and make possible recommendations regarding topics and/or items in the Wildlife Management Plan for Garden Ridge.

Commissioner McKinney reviewed the updated Wildlife Management Plan. He discussed the additional information as well as information still needed in the Wildlife Management Plan.

Motion: A motion was made by Vice-Chair Krawczynski, seconded by Commissioner Kneupper, to recommend to City Council the consideration of adopting this Wildlife Management Plan for the City of Garden Ridge. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

iii. Commissioner's Projects

1. Brochure/mailer from New Braunfels (Sullivan).

Commissioner Sullivan stated he spoke with Mr. Hensley and there is no money in the State for this purpose. He is going to get pricing for printing to be included as a mailer and will bring to next Commission meeting for Commission to review the wording and look of the brochure.

2. September 28th, 2019, Ribbon Cutting Event and Celebration (Segovia).

The Commission discussed the September 28, 2019, Ribbon Cutting Event and Celebration for the Gardens of Garden Ridge outside the Library at 2pm.

3. Health of wildlife in Garden Ridge.

The Commission discussed how the weather and rain has benefitted wildlife this year.

4. Future education/training sessions and Grapevine articles.

The Commission discussed the schedule for future education/training sessions: September – Commissioner McKinney (bats: the language of bats in Garden Ridge). October – Commissioner Kneupper (San Marcos Beekeepers Association: honeybees). November – Chair Segovia (TBD/possibly Humane Society to discuss habitat improvement).

iv. Meeting Updates/Reports

1. August 7, 2019, City Council Regular Meeting.

Vice-Chair Krawczynski stated he provided a monthly activity report to the City Council.

2. Parks Committee Monthly Meetings.

Councilmember Swint spoke regarding the items discussed at the last Parks Committee meeting as well as items the Parks Committee plans to work on during future meetings.

- v. **Ordinance No. 210-022018 An Ordinance of the City Council of the City of Garden Ridge adopting board and commission policy and procedures; providing that this Ordinance shall be cumulative of all Ordinances; providing a severability clause; providing a savings clause; and providing an effective date.**

1. Discuss expiring terms (September 30, 2019) of Commissioner Segovia, Commissioner Krawczynski, Commissioner Kneupper, and Commissioner Sullivan.

Commissioner Segovia, Commissioner Krawczynski, Commissioner Kneupper, and Commissioner Sullivan expressed they would like to seek reappointment for another term.

2. Make recommendation to City Council for consideration of reappointment.

Motion: A motion was made by Commissioner Bippert, seconded by Commissioner McKinney, to recommend to City Council the reappointment of Commissioner Segovia, Commissioner Krawczynski, Commissioner Kneupper, and Commissioner Sullivan to serve another term on the Wildlife Management Advisory Commission with terms expiring September 30, 2021. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

3. Interview possible candidates for the Wildlife Management Advisory Commission Place 7 vacancy (term expiring September 30, 2020).

The Commission interviewed Shannon Drichta for the vacancy with term expiring September 30, 2020.

4. Make recommendation to City Council for appointment of Commissioner.

Motion: A motion was made by Commissioner Sullivan, seconded by Vice-Chair Krawczynski, to recommend to City Council the appointment of Shannon Drichta to the Wildlife Management Advisory Commission Place 7 with term expiring September 30, 2020. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

5. Discuss and make recommendations related to application of ordinance provisions to commission members, if needed.

Chair Segovia stated the Commission did not have any additional matters to discuss at this time.

e) Future Agenda Items.

i. Commissioner input.

The Commission discussed Mr. Hensley presenting the census at the Commission's September meeting and Mr. Murphy attending either the September or October Commission meeting depending on the census timeline.

ii. Announcement of next Wildlife Management Advisory Commission Regular Meeting (Monday, September 16, 2019, at 6 p.m. at City Hall).

Chair Segovia announced the next Wildlife Management Advisory Commission Regular Meeting will be held on Monday, September 16, 2019, at 6:00 p.m. at City Hall.

7. Citizen Comment Period - limited to 20 minutes total

Dr. Jim Miller, 9910 Marie Meadow, spoke regarding Ordinance No. 210 and the schedule for conducting deer counts.

Kay Bower, 8947 Garden Ridge Drive, spoke regarding antivenom for coral snakes.

8. Adjournment

There being no further business, the Monday, August 19, 2019, Wildlife Management Advisory Commission Regular Meeting was adjourned at 7:35 p.m. by Chair Segovia.

ATTEST:

Cynthia Shanahan-Segovia, Chair

Marisa Spencer
City Secretary

Snakes of Garden Ridge Texas



Jeremiah McKinney, August 2019

SETTING

Gould Ecoregions of Texas

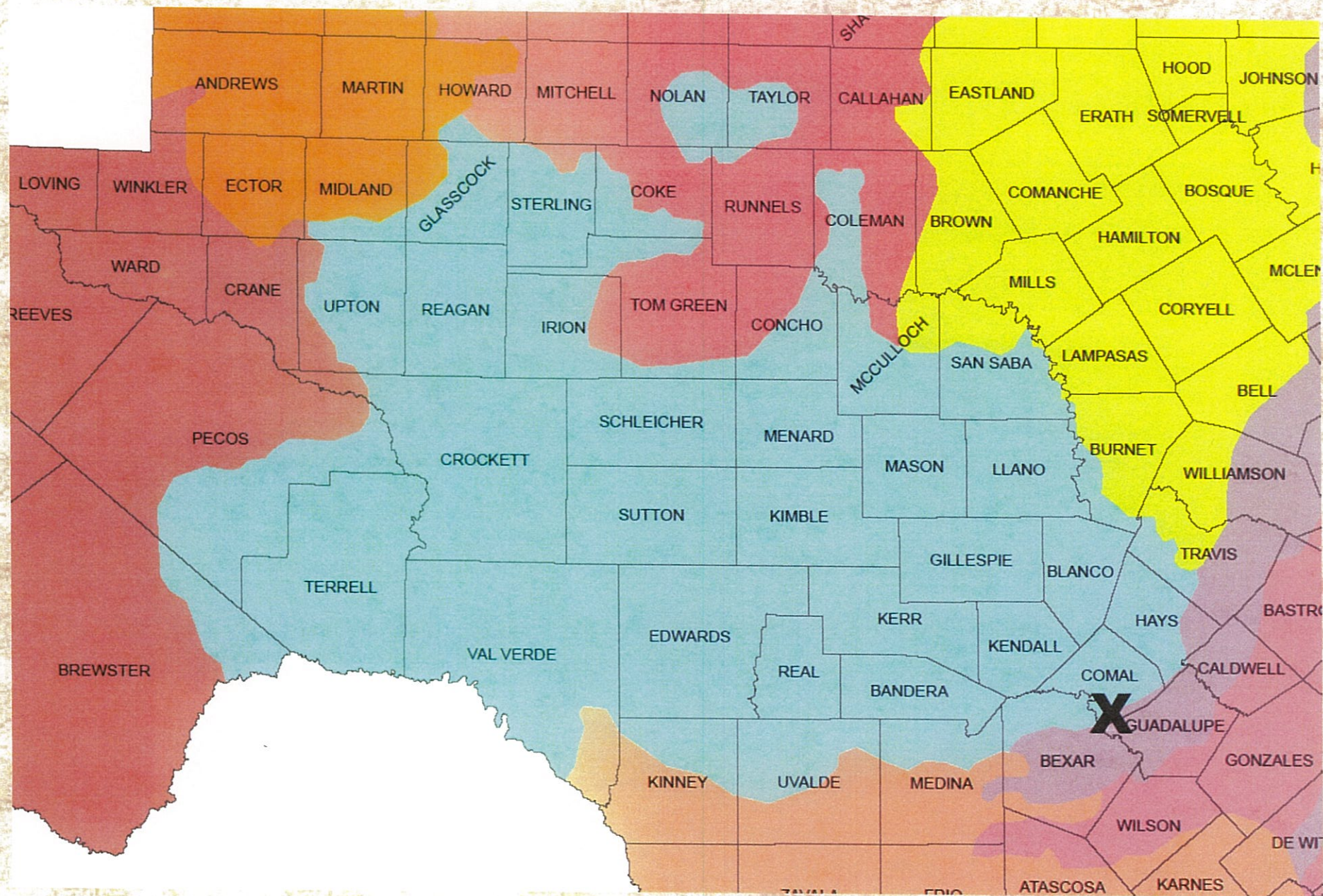


Source: Gould F. W., Hoffman, G. O., and Reichenbun, C. A. 1960. Vegetational areas of Texas. Texas A & M University Texas Agricultural Experiment Station, Leaflet No. 492 (here modified by the Texas Parks and Wildlife Department)



27 January 2011
 Prepared by Texas Wildlife Mapping System
 Map compiled by the Texas Parks & Wildlife Department
 CTS Lab. No claims are made to the accuracy of the data
 or to the suitability of the data for a particular use.

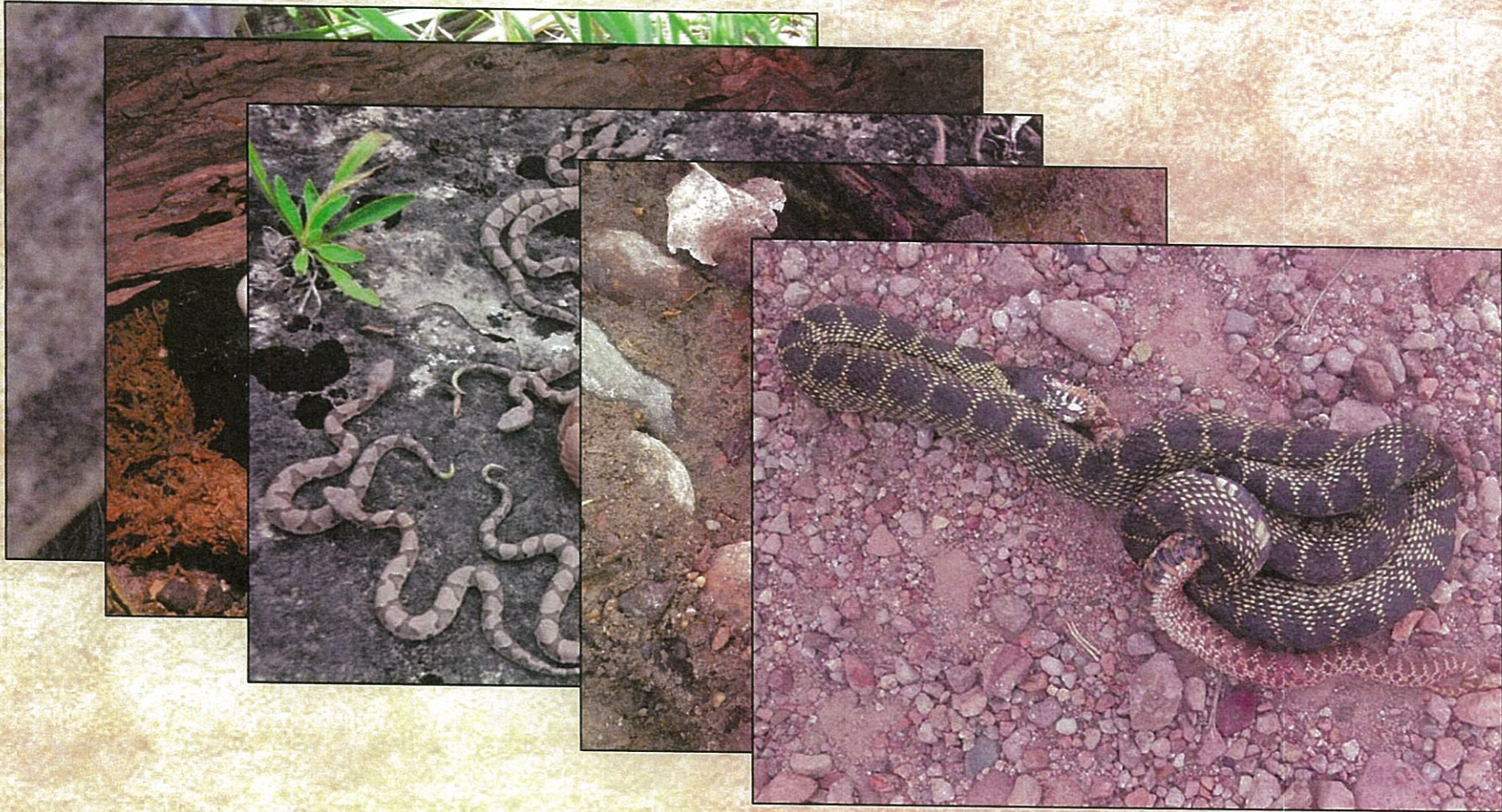
Edwards Plateau



Edwards Plateau



Snake Ecology



- Seasonal activity: Late February – Early November
- Ectothermic: relying on outside sources to regulate body temperature
- Primarily oviparous, but some ovoviparous
- Daily activity:
 - Spring & Fall diurnal
 - Summer diurnal (bi-modal) and nocturnal
- Prey: insects, rodents, lizards, frogs & toads, fish, birds and other snakes

Non-venomous snakes of Garden Ridge Area



Dekay's brown snake

- Occurrence: common
- Prey: insects
- Size: 6 – 13 inches
- Habitat: variety of habitats but favors areas wet shaded areas.



Non-venomous snakes of Garden Ridge Area



Checkered garter snake

- Occurrence: common
- Prey: insects, frogs & toads
- Size: 12 – 36 inches
- Habitat: variety of habitats but favors areas wet shaded areas.



Non-venomous snakes of Garden Ridge Area



Black-necked garter snake

- Occurrence: central and west Texas
- Prey: primarily frogs and toads
- Size: 16 – 20 inches
- Habitat: variety of arid habitats, favors sites with water or moist soils



Non-venomous snakes of Garden Ridge Area



Texas rat snake

- Occurrence: common
- Prey: rodents and birds including eggs
- Size: 42 – 72 inches
- Habitat: variety of habitats
- very agile climbers

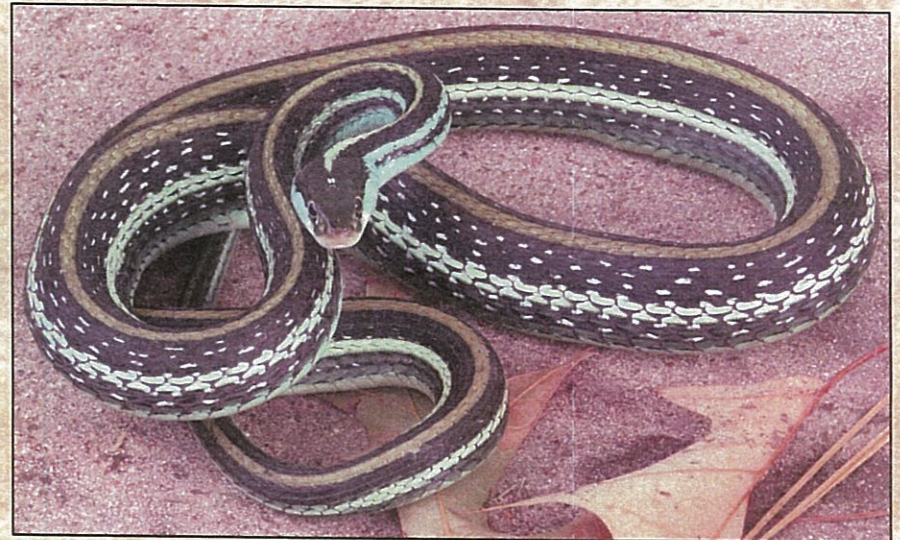


Non-venomous snakes of Garden Ridge Area



Ribbon snake

- Occurrence: common
- Prey: insects, frogs/toads and small fish
- Size: 20 – 30 inches
- Habitat: variety of habitats, prefer wetlands



Non-venomous snakes of Garden Ridge Area



Rough green snake

- Occurrence: common
- Prey: insects and frogs
- Size: 22 – 32 inches
- Habitat: variety of habitats, most arboreal species in Texas



Non-venomous snakes of Garden Ridge Area



Great Plains rat snake

- Occurrence: common
- Prey: small mammals, birds including eggs
- Size: 24 – 48 inches
- Habitat: variety of habitats, attracted to suburban gardens from occasional watering



Non-venomous snakes of Garden Ridge Area



Flathead snake

- Occurrence: common
- Prey: small insects
- Size: 7 – 8 inches
- Habitat: variety of habitats, favors sites with loose damp soil for burrowing



Non-venomous snakes of Garden Ridge Area



Texas blind snake

- Occurrence: common
- Prey: ants, termites and their eggs
- Size: 5 – 8 inches
- Habitat: variety of habitats, favors upland sites with loose damp soil for burrowing



Non-venomous snakes of Garden Ridge Area



Western coachwhip

- Occurrence: common
- Prey: small mammals, birds and their eggs, snakes, turtles and lizards
- Size: 4 – 5.5 feet
- Habitat: variety of habitats, favors sites with rocky terrain



Non-venomous snakes of Garden Ridge Area



Schott's whipsnake

- Occurrence: south Texas
- Prey: lizards and birds
- Size: 40 – 56 inches
- Habitat: variety of arid, favors sites with streams nearby



Non-venomous snakes of Garden Ridge Area

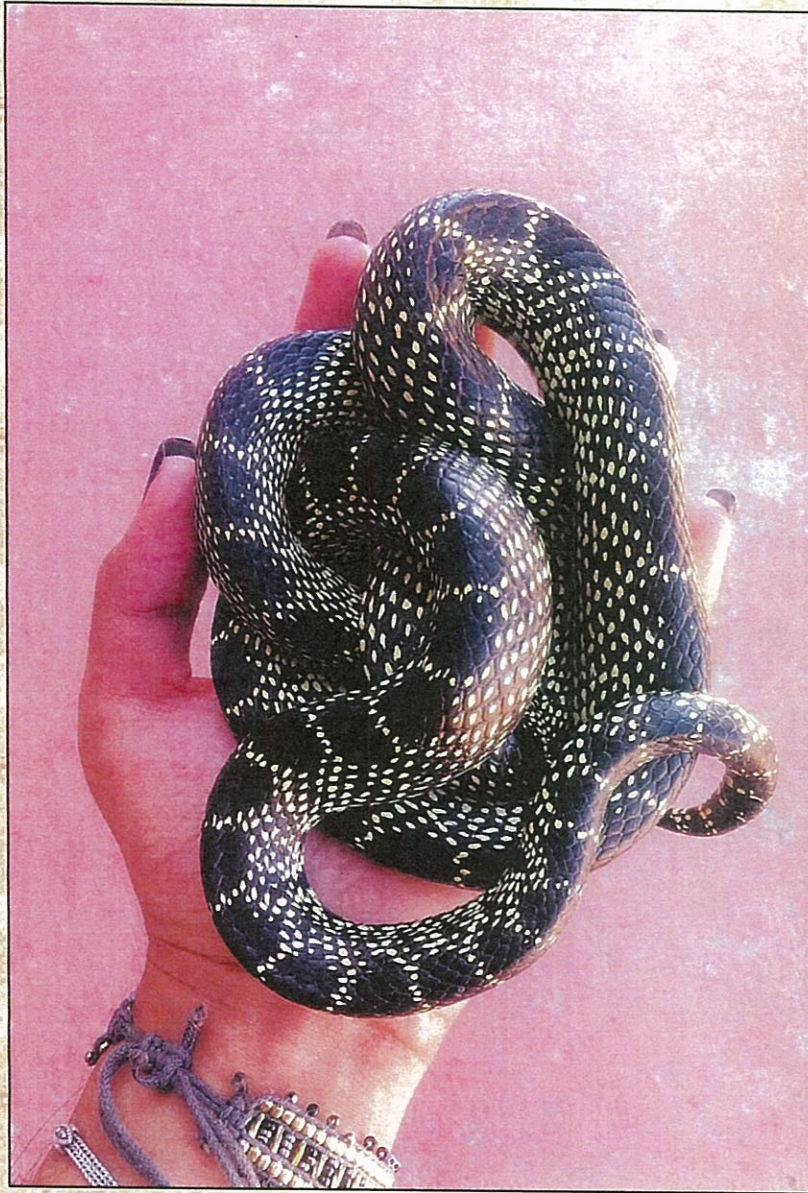


Bull snake

- Occurrence: north, central and south Texas
- Prey: lizards and birds
- Size: 4 – 5 feet (can exceed 8 feet)
- Habitat: variety of habitats but favors farmlands with abundance of rodents



Non-venomous snakes of Garden Ridge Area

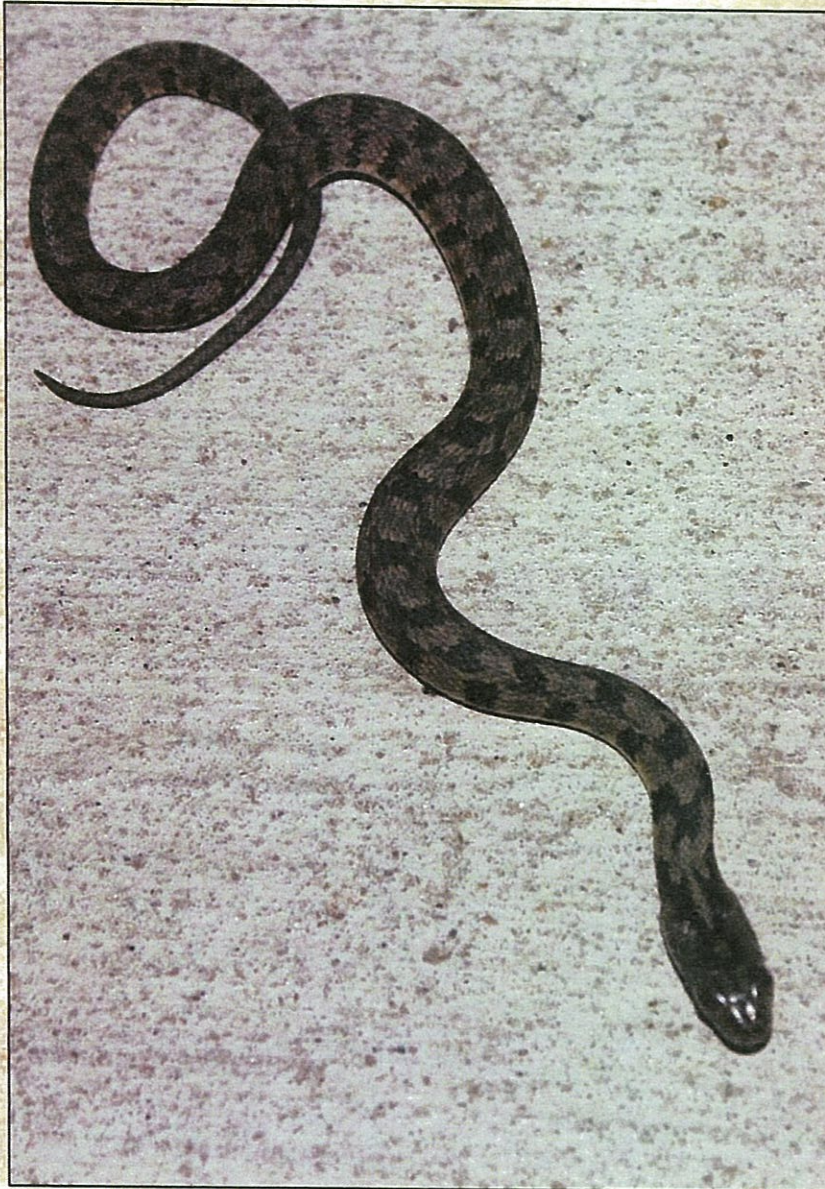


Desert kingsnake

- Occurrence: central, south and west Texas
- Prey: lizards, frogs, small mammals and other snakes
- Size: 2.5 – 3.5 feet
- Habitat: variety of habitats but favors sites with refuge from high summer temps



Non-venomous snakes of Garden Ridge Area



Diamond-backed water snake

- Occurrence: central, south and east Texas
- Prey: frogs, toads and fish
- Size: 2.5 – 3.5 feet
- Habitat: variety of habitats wetland habitats including streams, ponds and lakes



Non-venomous snakes of Garden Ridge Area



Plain-bellied water snake

- Occurrence: central, southeast and east Texas
- Prey: frogs, toads and fish
- Size: 2.5 – 3.5 feet
- Habitat: variety of habitats wetland habitats including streams, ponds and lakes



Venomous snakes of Garden Ridge Area



Texas coral snake

- Occurrence: common in central and south Texas
- Prey: small reptiles and amphibians, including snakes
- Size: 2 – 3 feet
- Habitat: variety of arid habitats, where partially wooded areas occur with organic ground litter.
- Small fixed fangs (not in rear) less effective for envenomation than pit-vipers
- Venom highly toxic



Venomous snakes of Garden Ridge Area



Western diamondback rattlesnake

- Occurrence: common in central, south and west Texas
- Prey: small mammals to rabbits
- Size: 2 – 4 feet (can exceed 6 ft)
- Habitat: variety of habitats excluding pine woodlands
- Number of rattles not always indicative of age
- Venom highly toxic



Venomous snakes of Garden Ridge Area



Broad-banded copperhead

- Occurrence: common in central and north central Texas
- Prey: insects and small mammals
- Size: 2 - 3 feet
- Habitat: wooded habitats where ample leaf litter persists
- Relatively small fanged
- Venom highly toxic



Venomous snakes of Garden Ridge Area

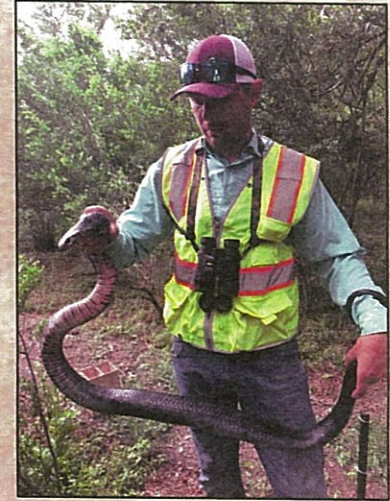
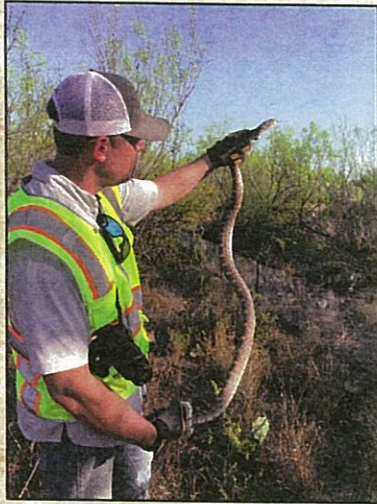


Cottonmouth water snake

- Occurrence: common in central and east Texas
- Prey: fish amphibians and reptiles
- Size: 2 - 3 feet
- Habitat: wetlands including ponds, streams and lakes including surrounding woodlands
- Venom highly toxic



Snakes of Garden Ridge Area Summary



- Wide variety of species of potential occurrence.
- 4 venomous species
- Habitat management can promote ongoing persistence of snake species.
- Snake Bite Statistics from Texas Department of State Health Services
 - About 7,000 people are bitten by venomous snakes in the United States annually.
 - Only 0.2% (1 out of 500) venomous snakebites result in death.
 - On average, 1 to 2 people in Texas die each year from venomous snake bites.
 - Roughly half of all venomous snakebites are “dry.” That is, the snake does not inject venom into the victim.

Snakes of Garden Ridge Area

QUESTIONS????

GARDEN RIDGE POLICE DEPARTMENT



MEMORANDUM

To: Wildlife Management Advisory Commission
City of Garden Ridge

From: Ron Eberhardt
Chief of Police
City of Garden Ridge

Date: 9 September 2019

Copies:

Reference: Monthly Wildlife Statistics

Members of the Commission,

Here is the data collected for the preceding weeks regarding the Police Departments involvement with animal related calls. These numbers do not include any cases related to domestic dogs or cats.

13 August 2019 through 9 September 2019

- 1- Dead deer in roadway FM 2252 / removed
- 1- Injured deer / hit by vehicle on FM3009 / dispatched on scene
- 1- Injured deer / hit by car FM2252 / walked away injured
- 1- Injured deer reported on Timber Rose / Officer unable to locate



MONTHLY ANIMAL SERVICES REPORT

September 2019

Year to Date Wildlife Report

	Jan	Feb.	Mar	Apr.	May	Jun	Jul	Aug.	Sep.	Oct	Nov	Dec.	Total
Deer	11	6	5	2	10	11	9	9					63
Raccoons	5	3	3	3	5	4	4	4					28
Possums	2	1	1	4	2	3	1	1					15
Skunks	5	0	0	0	0	0	0	1					6
Wild hogs	0	0	0	0	0	0	0	0					0
Turtles	0	0	0	0	1	2	2	0					5
Squirrels	0	2	0	0	2	0	1	0					5
Foxes	1	1	0	0	0	1	0	0					3
Armadillos	0	1	0	1	1	0	0	1					4
Hawks	1	0	0	0	0	0	0	0					1
Bats	0	0	1	0	0	0	0	2					3
Coyotes	0	0	1	0	0	0	0	0					1
Buzzards	0	0	0	0	0	0	0	0					0
Ringtails	0	0	0	0	0	0	0	0					0
Snakes	0	0	0	1	0	4	1	1					7
Other	0	1	0	0	1	0	0	0					2
YTD Total	25	15	11	11	22	25	18	19					146

Additional information

Information on the 9 deer:

- 4 - predator attack (unknown predator)
- 1 - vehicle
- 2 - natural
- 2 - released

DRAFT 09-09-19

City of Garden Ridge Wildlife Management Plan

Prepared by:
Garden Ridge Wildlife Management Advisory Commission

September 2019

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- A. Exhibits
- B. White-tailed deer Census & Herd Health Monitoring Data
- C. Native Plant List & Local Nurseries
- D. Invasive & Noxious Plants
- E. Brown-headed cowbird Information

-
- F. Oak wilt information
 - G. Nest/Bat box design
 - H. Landscape design
 - I. Venomous snake ID & Safety

LIST OF EXHIBITS

- 1. Garden Ridge Location Map
- 2. Garden Ridge Aerial Map
- 3. Garden Ridge Vegetation Community Map

1. INTRODUCTION

This wildlife management plan (plan) was prepared for the City of Garden Ridge, by the Garden Ridge Wildlife Management Advisory Commission (WMAC) and approved by City Council on X. The purpose of a wildlife management plan is to document the practices that may be taken to manage wildlife resources of a given area. In this case, the plan will serve to detail the proposed wildlife management practices of the City of Garden Ridge while providing recommendations for private residents and landowners. Wildlife management practices can provide direct and indirect benefit to wildlife and applies to both plant and animal species. The primary intent of this plan is to encourage ongoing enhancement of local wildlife species, with a focus on habitat management. This plan was developed in consultation with the Texas Parks and Wildlife Department (TPWD), to ensure that feasible and sound management practices were considered. If at any time new information becomes available that would warrant a change or update to the plan, the GRWMAC will recommend the appropriate changes as needed.

1. Ecological History of Garden Ridge

The City of Garden Ridge occurs in Comal County (see **Exhibit 1** and **Exhibit 2** of **Attachment A**), at the southeastern limits of the Edwards Plateau Ecoregion of Texas (TPWD, 1960). “When the Edward Plateau region 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. Many of the woody brush species were readily grazed by sheep, goats, cattle, and an increasing deer herd. These animals have selective eating habits and eat the more desirable plants first and leave the less desirable plants for last. By the 1940's, many of the good quality plant species were highly depleted and not readily found on most ranges. The Edwards Plateau is now dominated by many poor-quality browse, forb, and grass plants. Ashe juniper and red berry juniper (commonly called cedar) are highly undesirable forage plants for domestic livestock and deer. In much of the Edwards Plateau, cedar has become the dominant plant species causing a once diverse and healthy landscape to become a "cedar break" in many areas with very little plant diversity on the landscape” (TPWD, 2019).

2. Vegetation Communities / Habitats of Garden Ridge

The City of Garden Ridge comprises 4,882.7 acres of mixed land uses including residential, commercial, undeveloped and industrial lands. As shown in **Exhibit 3** of **Attachment A**, five vegetation communities comprise the majority Garden Ridge. **Table 1.** details the approximate aerial acreage of each and the quality of wildlife habitat they provide.

Table 1. Approximate Acreage of Habitat Types of Garden Ridge

Description	Approximate Acreage	Percent Cover	Habitat Quality for Wildlife
Residential	2,267.2	46.4%	Moderate/Low
Oak/Cedar woodlands	1,094.6	22.4%	High
Non-vegetated – Quarry	912.0	18.7%	low
Oak/Cedar Savannah	127.7	2.6%	High
Fallow shrubland	300.0	6.1%	High/Moderate
Improved pasture	172.5	3.5%	Low
Aquatic	12.0	0.2%	High

Total: 4,886 100%

Residential

The City of Garden Ridge is currently comprised primarily of lands developed for residential land use. As shown on **Exhibit 3**, these areas total approximately 2,364 acres (48.4 percent) of land within the city limits. These areas typically exhibit the vegetative stand of a well-developed forest with a dense canopy of mixed hardwoods, and understory dominated by non-native sod-grasses. Live oak (*Quercus virginiana*), cedar elm (*Ulmus crassifolia*) and ashe juniper (*Juniperus ashei*) are the dominant trees with interspersed species planted by landowners. The mid-story consists of various shrubs, most of which have been planted for landscaping. The herbaceous stratum is sod-grasses including bermuda grass (*Cynodon dactylon*), St. Augustine (*Stenotaphrum secundatum*) and zoysia grass (*Zoysia* sp.). These areas typically provide suitable habitat for small wildlife species including birds, small mammals, reptiles and amphibians. This habitat type is less suitable for large mammals such as white-tailed deer due to the replacement of naturally occurring food sources with non-native plants.

Oak/Cedar Woodlands

These areas occur where canopy cover ranges from closed to moderate from live oak, cedar elm (*Ulmus crassifolia*) and cedar with a smaller component of cedar elm and sugarberry (*Celtis laevigata*). The mid-story consists primarily of Texas persimmon (*Diospyros texana*), western soapberry (*Sapindus saponaria*) and younger plants of cedar. Plant densities in the herbaceous stratum vary with canopy cover with and range moderate to low. These areas provide good habitat for a variety of forest and woodland species.

Oak/Cedar Savannah

This vegetation type occurs at sites where a mix of woody species has been allowed to re-establish where pastureland previously occurred. The primary woody species are young live oak, and cedar with interspersed mesquite (*Prosopis glandulosa*) and huisache (*Vachellia farnesiana*). The canopy is open in these areas which promotes a dense herbaceous stratum of mixed grasses and forbs. This vegetation community provides good habitat for a variety of local wildlife species.

Improved pasture

These areas comprise grassland areas cleared of woody vegetation. In some cases, these areas may have been historically used for livestock grazing while others are used for hay production. In the cases where annual tillage and harvest do not occur, the primary cover types are KR bluestem (*Bothriochloa ischaemum*), bermudagrass (*Cynodon dactylon*) with some buffalo grass (*Bouteloua dactyloides*). Diversity in these areas is typically low, with limited food sources and a dense thatch layer which restricts natural movement by grassland species. Pastures where tillage occurs typically possess a more diverse mix of early successional species including johnsongrass (*Sorghum halepense*) and silver bluestem (*Bothriochloa laguroides*), yet annual harvest activities remove cover for wildlife.

Fallow shrubland

Fallow shrublands occur at disturbed sites that receive little or low levels of habitat management. These areas possess a mix of woody and herbaceous species with common occurrences of sugarberry, mesquite, huisache, retama (*Parkinsonia aculeata*) and baccharis (*Baccharis* sp.). The herbaceous stratum in these areas is comprised of a diverse mix of early successional species. These sites provide good habitat for a variety of wildlife due to a mix of cover types and food sources.

Aquatic

Man-made ponds serve as the only aquatic habitats within the city of Garden Ridge. These sites are privately managed and provide valuable water sources for the numerous species that occur in the area including migratory birds. These sites also serve as breeding habitat for amphibians including frogs and toads and feeding sites for waterfowl and wading birds.

2.0 WILDLIFE MANAGEMENT ADVISORY COMMISSION

By City ordinance 196-032018, the City of Garden Ridge established a Wildlife Management Advisory Commission (GRWMAC). This commission was first created to formulate recommendations on the management of the white-tailed deer population. Since its establishment, the GRWMAC has expanded its assistance from white-tailed deer recommendations, to education trainings on native plants for landscaping,

migratory birds and urban wildlife management. **Section 6** of this document provides more detail on wildlife trainings and outreach.

3.0 GOALS

During the development of this plan, the following goals were considered of primary importance for the residence and wildlife of Garden Ridge.

1. **Management of White-tailed deer:** As with much of Comal County, the city of Garden Ridge is host to robust white-tailed deer (WTD) population. In 1998, the estimated 1,555,000 white-tailed deer population for the Hill Country constituted over 40 percent of the white-tailed deer found in Texas (Young and Traweek 1999). Census data from 2018 estimated a total of 1.9 acre per deer within the Garden Ridge. This differs greatly from the recommended stocking rate of 12-16 acre per deer (TPWD 2008). Accordingly, GR has committed to reducing the WTD herd to a target of 5 acres per deer.
2. **Improve Habitat for Wildlife:** The city shall, when feasible, incorporate the practices detailed in this plan to manage and enhance lands for wildlife. The city also encourages its residents to utilize this plan to enhance private lands for wildlife.
3. **Improve City Lands for Pollinator Species:** The city of Garden Ridge occurs within the migratory flyway and summer breeding area of the eastern monarch butterfly. The monarch population has recently declined to a fraction of its previous size. In the 1990s, estimates of up to one billion monarchs made the epic flight each fall from the northern plains of the U.S. and Canada to sites in the Oyamel fir forests northwest of Mexico City, and more than one million monarchs overwintered in forested groves on the California coast. In the winter of 2013-2014, estimates from overwintering sites in Mexico suggest that only about 33 million monarchs overwintered, representing a 90% drop from the 20-year average (Nature Serve 2015). To assist in conservation of this species as other valuable pollinators of the area, the City of Garden Ridge has committed to participate in the Mayor's Monarch Pledge by proclamation dated May 1, 2019. The following link details the various conservation measures recommended for participants in the program. At the development of this plan, the city was already practicing actions items 1,2,3,5,6,7,8,10 and 15.

<https://www.nwf.org/MayorsMonarchPledge/About/Pledge-Action-Items>

Citizens of Garden Ridge are encouraged to visit the link above for recommendations to enhance private property for monarch butterflies and other pollinator species.

4. **Promote Education for Wildlife:** The city of Garden Ridge recognizes the immense value gained by its residents through the persistence of wildlife and their associated habitats. As such, the city will provide ongoing programs and presentations to further education for wildlife and wildlife habitats.

4.0 COORDINATION & PERMITS

During the development of this plan, the city coordinated with Texas Parks and Wildlife for recommendations on management and enhancement measures for wildlife.

1. White-tailed deer Permits

In years when census data imply that population control is needed for white-tailed deer of Garden Ridge, the city will obtain the proper permits required by state law. These may include permits for trapping and relocation based on the current needs of the city. For information on white-tailed deer management see **Section 5.1 and Attachment B**).

2. Brown-headed cowbird Permits

Any persons assisting with city with the trapping of brown-headed cowbirds shall obtain the required training and associated permits.

4.1. HABITAT MANAGEMENT

The city of Garden Ridge proposes various measures to manage habitat for wildlife. These include the management of white-tailed deer, invasive plant & animal control, oak wilt control and native plantings.

5.1 White-tailed deer management

5.1(a) Annual Census:

An annual census will be performed to estimate the population of white-tailed deer in Garden Ridge. From those results, a determination will be made for the need, if any, of population control. Methodologies used for the census will be those recommended by TPWD. (see **Attachment B** for WTD census results)

5.1(b) Population Control:

Given that very few large land tracts exist within the city limits today, hunting is a not a feasible means to control the local White Tail Deer (WTD) population. As such, the city has elected to utilize trapping methods approved through TPWD to assist in population control. These include trap, transport and process (TTP) and trap, transport and transplant (TTT). For detail on TTP and TTT please visit TPWD website:

https://tpwd.texas.gov/business/permits/land/wildlife_management/trap_transport/.

To reach the target goal of 5 acres per deer, annual trapping will persist at a rate recommended by TPWD. Annual recommendations, which may vary will be obtained by TPWD following census results. Trapping methods will also vary based on the availability of transport properties and TPWD approval. Processed WTD meat will be donated to approved local charity organizations.

5.1(c) Herd Health Monitoring

Reduced WTD population numbers will decrease browse pressure and provide higher forage potential for WTD and other species. Higher forage potential increases animal health and vigor. To assess

animal health and vigor, herd health monitoring will be conducted through an assessment of body weight and age (see **Attachment B** for WTD health monitoring data). This data will be obtained in years when trapping and processing occurs.

5.1(d) Conflict Management Practices

In Garden Ridge conflict between residents and wildlife may occur. It is always recommended to avoid physical contact with any wild animal including white-tailed deer fawns. Other common practices to avoid conflict with white-tailed deer include:

- Avoid feeding of deer as per Ordinance 186-092018.
- Obey posted speed limits.
- To help minimize landscape damage, it is recommended to plant varieties that are less favored by deer (see **Attachment C.**) and install fences when feasible.

Additional conflict management practices for white-tailed deer can be found at:

https://www.humanesociety.org/sites/default/files/docs/HSUS%20Deer%20Conflict%20Mgt%20Plan_FINAL.pdf

Texas is home to a number of raptors and the Red-shouldered hawk is common to the Garden Ridge area. When nesting, these large birds can be territorial toward humans and other wildlife. If an active nest is found the city recommends establishing an avoidance buffer when feasible. This will help to ensure the nesting pair and young do not feel threatened. **Note:** Red-shouldered hawks and any other raptors and migratory birds are protected by federal law, and the removal of a nest without the proper permit is illegal.

5.2 Control & Management of Invasive & Noxious Species

5.2(a) Invasive & Toxic Plant Management

A variety of toxic and invasive plants occur in the central Texas area (see **Attachment D**). These include native and non-native species that typically grow aggressively, multiply quickly without natural controls, and display adverse effects through contact or ingestion. When feasible, the city will implement standard practices to remove these plants such as mechanical removal and herbicide treatments. Any herbicide treatment will follow label instructions in compliance with all state and federal regulations. The goal of this effort is to promote a diverse mix of native plants in the city for wildlife. The city recommends that citizens review **Attachment D** for species to control or avoid as landscape plants.

5.2(b) Invasive & Nuisance Wildlife Management

Invasive wildlife can have profound impacts on native species, habitats and humans alike. Feral pigs are an invasive species that has been documented within the city. Feral pigs cause millions of dollars damage annually to the agriculture lands and residential landscaping. To minimize impacts from feral pigs, the city will trap when sightings occur.

Comal county is home to a wide variety of songbirds including the brown headed cowbird. This species is a brood parasite that lays its eggs in the nests of other songbirds. Studies have shown that the brown-headed cowbird to parasitize more than 225 species of American birds and that the

removal of one cowbird female enhances the survival of 35 songbird per year (TPWD, 2019). To minimize impacts to local songbird populations, the city will participate in the TPWD cowbird trapping program. All cowbird trapping efforts will follow TPWD protocol and local residents are encouraged to participate in addition to the city's efforts. **Attachment E** includes information on brown headed cowbirds and the TPWD trapping protocol.

5.3 Oak Wilt Management

Oak wilt is one of the most destructive tree diseases in the United States, and it is killing oak trees in Central Texas at epidemic proportions. Oak wilt is an infectious disease caused by the fungus *Ceratomyces fagacearum*, which invades and disables the water-conducting system in susceptible trees. All species of oaks (*Quercus* spp.) in Central Texas can be infected with the oak wilt fungus. (Texas Forest Service, 2019). **Attachment F** includes information on oak wilt. On March 7, 2018, ordinance #71-032018 was passed to follow guidelines from the Texas Forest Service to combat the spread of oak wilt.

5.4 Native Plantings

Where feasible, the city will plant native plant species in common areas such as parks, city building areas and right of ways. These species are adapted to the local climate requiring less water or fertilizer and provide food and cover for native wildlife. **Attachment C** includes a list of native species that may be planted which are recommended for the area. The city recommends residents use these species when feasible. Also included in **Attachment C** is list of native plant nurseries currently in the area.

6.0 RECOMMENDATIONS FOR PRIVATE LANDOWNERS

With few lands under city control, the highest potential for wildlife enhancement and management resides with the residents of Garden Ridge. The following list of practices are recommended for Garden Ridge residents for wildlife enhancement. Singularly, these measures have a small impact, yet when implemented by multiple residents, the cumulative benefits can be profound for local wildlife.

6.1 Supplemental Water & Feeding of Migratory Birds

Texas is host to nearly 650 bird species and supplemental water and feed can benefit these species in migration or the extreme periods of winter and summer. Bird feeders and watering areas also bring people and birds together. These features can enhance the local awareness to the variety of bird species that frequent the area. When feasible, the city recommends the feeding of birds following recommendations from the U.S. Fish and Wildlife Service available at <https://www.fws.gov/birds/bird-enthusiasts/backyard/bird-feeding.php>.

6.2 Supplemental Cover & Nest/Roost Boxes

Wildlife utilize cover to travel, rear young, evade predators and extreme climate conditions. This is similar with nest/roost boxes. When feasible, the city recommends adding supplemental cover for wildlife such as leaf piles beneath shrubs and small piles of brush/tree trimmings and rocks. Low growing plants and shrubs can also provide cover for wildlife. Nest/Roost boxes are also recommended

for birds and bats. These features provide safe sites for the rearing of young. **Attachment G** includes a few basic nest and bat boxes designs for consideration by residents.

6.3 Landscaping Practices

With the proper design, residential landscaping can provide quality habitat for a variety of wildlife species. The following provides a few concepts to consider in landscape design for wildlife enhancement.

1. Plant selection & Diversity: Selecting the right plants can greatly enhance residential areas for wildlife. Native plants typically provide a natural food source and cover while requiring far less water or fertilization from homeowners. Additional benefit is gained by planting a variety of plants. This will result in flowering and fruiting at various times throughout the year.
2. Structure & Edge: Wildlife benefit greatly from habitats that possess a variety of physical structure. As such, when feasible, it is recommended to incorporate structural diversity to include an upper canopy (trees), mid-story (shrubs) and herbaceous stratum (low growing plants, such as annual or perennial flowers). Many wildlife species utilize edge habitats for nesting, feeding and travel. When feasible, it is recommended to create edge habitats within landscaped areas. For an example of structural diversity and edge habitats please see **Attachment H** or click the link below.
<http://agrillife.org/water/files/2014/01/central-texas-landscape-design-guide.pdf>

7.0 PUBLIC OUTREACH & EDUCATION

The City of Garden Ridge acknowledges that public outreach is essential to promoting wildlife and the safety of its residents. The following measures and services are provided to enhance education and promote participation with the cities goals of managing wildlife.

7.1 Presentations, Field Days & Local Events

Educational presentations on wildlife are provided on monthly basis during the GRWMAC meetings. For information on upcoming meetings visit the city website at the link below.

<https://ci.garden-ridge.tx.us/>

7.2 GR Species List & Wildlife Sightings

The GRWMAC encourages the residents of Garden Ridge to report wildlife sightings within the city limits. This information can be used to educate our residents to the variety of species that inhabit the city as year-round and as migrants. Tap on the link below to view sightings in Garden Ridge and to report wildlife sightings.

https://www.inaturalist.org/observations?place_id=141459

7.3 GR Facebook

For updates on city information and upcoming events visit the city's Facebook page at:

<https://www.facebook.com/City-of-Garden-Ridge-TX-259855264119437/>

7.4 GR Notify Me

To receive updates on city business or events please visit the city website and use the Notify Me service at :<https://ci.garden-ridge.tx.us/list.aspx>

7.4 Venomous Snake ID & Safety

As with much of central Texas, Garden Ridge is home to a variety of snake species. While the majority of these species are harmless, venomous species have the potential to occur. For information on proper snake identification and safety measures, please refer to **Attachment I** or click the link below.

<https://tpwd.texas.gov/education/resources/texas-junior-naturalists/snakes-alive/venomous-texas-snakes>

7.0 REFERENCES

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Young, E. L. and M. Traweek (1997). White-tailed deer age, weight and antler development survey. Federal Aid in Wildl. Rest. W-127-R-5. Project No. 14. Texas Parks and Wildlife Dept. Austin.



You Are Invited to A
Celebration

Date: Saturday, September 28

Time: 2—4pm

Location: Garden Ridge Library

Light Refreshments Will Be Served

Please Come Show Your Appreciation to the
Comal Master Gardeners and Volunteer Garden Ridge!
for their hard work in creating the

"Gardens of Garden Ridge"
for the Library

Sponsored by Volunteer Garden Ridge! and the Library



Future Agenda Items

Wildlife Management Advisory Commission

October 21, 2019 Regular Meeting

14 days before Meeting	(10/07/19)	Commission and Staff items are due
10 days before Meeting	(10/11/19)	City Administrator and Chair review agenda. City Attorney is sent the agenda for approval.
6 days before Meeting	(10/15/19)	Post Agenda on bulletin board and Commission will receive packet (allowing a day and half for corrections and to request additional information to be added)
4 days before Meeting	(10/17/19)	Post Agenda Packet to City Website
3 days before Meeting	(10/18/19)	(72 hours) – Local Government Code requirement for posting

City Council = Red
 Impact Fee Committee = Pink
 Quarry Commission = Purple
 Planning & Zoning = Green
 Water Commission = Blue
 Wildlife Management Advisory Commission = Brown
 City Holiday = Orange
 Municipal Court = Gray
 National Night Out = Yellow

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Approval

1. Minutes 09-16-19

Discussion/Reports

1. Wildlife Management Plan and Health of the wildlife in Garden Ridge
2. Police/Animal Services Wildlife Report
3. City Council Update
4. Ordinance 210
5. Future Agenda Items (Commissioners' input / Announce next meeting: Nov. 18 at 6pm)

Training Session

- Commissioner Kneupper-Honey Bees

November 18, 2019

Regular Meeting

14 days before Meeting	(11/04/19)	Commission and Staff items are due
10 days before Meeting	(11/08/19)	City Administrator and Chair review agenda. City Attorney is sent the agenda for approval.
6 days before Meeting	(11/12/19)	Post Agenda on bulletin board and Commission will receive packet (allowing a day and half for corrections and to request additional information to be added)
4 days before Meeting	(11/14/19)	Post Agenda Packet to City Website
3 days before Meeting	(11/15/19)	(72 hours) – Local Government Code requirement for posting

City Council = Red

Impact Fee Committee = Pink

Quarry Commission = Purple

Planning & Zoning = Green

Water Commission = Blue

Wildlife Management Advisory Commission = Brown

City Holiday = Orange

Municipal Court = Gray

Sun	Mon	Tues	Wed	Thur	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Approval

1. Minutes 10-21-19

Discussion/Reports

1. Wildlife Management Plan and Health of the wildlife in Garden Ridge
2. Police/Animal Services Wildlife Report
3. City Council Update
4. Ordinance 210
5. Future Agenda Items (Commissioners' input / Announce next meeting: Dec. 16 at 6pm)

Training Session

- Chair Segovia – TBD (possibly Humane Society)

PENDING FUTURE AGENDA ITEMS

- Education/training session regarding social media from City Attorney (Kneupper)
- Update on research performed on non-drug birth control studies (Segovia).
- Hunting on Hanson Quarry
- Identify signs of wildlife
- Discussion on future surveys, including adult children (age 18 or older) living at home (Kneupper)
- Cost and provider for autopsy of a deer showing signs of Bottleneck (Krawczynski)

UPCOMING EDUCATION/TRAINING SESSIONS