



Gulf Coast Prairie LCC: Focal Species & Associated Habitats: Approved in January, 2014

The following list of focal species and their associated habitats was approved for use by the Gulf Coast Prairie LCC Steering Committee on January 9th, 2014 at their meeting in McAllen, Texas. The Steering Committee also approved the tiered approach presented by the Science Team that will enable an efficient approach utilizing species assemblages.

Tier	Species Common Name
1	Alligator Gar
	American Oyster
	Guadalupe Bass
	Mottled Duck
	Northern Bobwhite
	Quadrula spp. (freshwater mussels) ¹
2	Black Skimmer
	Blue Crab
	Broadcast-spawning Prairie Minnows ²
	Brown Pelican
	Eastern Meadowlark
	Eurycea spp. (salamanders) ³
	Golden-cheeked Warbler
	Little Blue Heron
	Penaeid Shrimp ⁴
	Red-billed Pigeon
	Sea Turtles ⁵
	White Bass
3	Black-capped Vireo
	Brazilian (Mexican) Free-tailed Bat
	Crawfish Frog
	Diamondback Terrapin
	Dionda spp. (minnows) ⁶
	Gulf Menhaden
	Northern Pintail
	Rafinesque's Big-Eared Bat
	River Prawns
	White-tipped Dove

Table 1: Focal Species for the Gulf Coast Prairie LCC

¹ Quadrula spp. includes: Golden Orb, Smooth Pimpleback, Texas Pimpleback, Winged Mapleleaf, and Wartyback

² Guild represented by Small eyed shiner, Red River shiner, Sharpnose shiner, Arkansas River shiner, Chub shiner, Silverband shiner, Tamaulipas shiner, Rio Grande shiner, Sabine shiner, all Macrhybopsis spp. including the M. species clade and Silver Chub), Plains minnow, Rio Grande silvery minnow, and Mississippi silvery minnow

³ Eurycea spp. includes the following salamanders: the Salado Springs, Cascade Caverns, San Marcos, Georgetown, Texas, Blanco River springs, Texas blind, Blanco blind, Barton Springs, Jollyville Plateau, Comal blind, and Austin blind

⁴ Penaeid shrimp includes Brown, White, and Pink shrimp

⁵ Sea turtles includes the Green Sea Turtle and the Kemp's Ridley Sea Turtle

⁶ Dionda spp. includes the following minnows: Devil's River, Manantial Roundnose, Nueces Roundnose, Spotted, Guadalupe Roundnose, and Roundnose



Background

The GCP LCC is made up of four Eco-regions, which correspond to the Bird Conservation Regions: the Edwards Plateau, Gulf Coast Prairie, Oaks & Prairies, and the Tamaulipan Brushlands. It is a diverse area that covers approximately 100 million acres in the U.S. plus parts of three Mexican States. The Science Team has had excellent discussions on identifying and defining habitats and the result is a list of seventeen broadly defined habitats that the partners can use in directing efforts to link species to habitat needs through SHC, communicating to others about our conservation work, and directing science resources.

The six Tier 1 species occur in twelve of the seventeen broadly defined habitats listed below:

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| 1) Tidal Wetlands | 10) Mixed Deciduous & Juniper Woodlands |
| 2) Floodplain Forests, Swamps & Riparian Systems | 11) Oak Hardwood & Pine Forests |
| 3) Rivers & Lakes | 12) Shrubland & Shortgrass (Mixedgrass) Prairie |
| 4) Headwaters & Streams | 13) Semi-desert Shrub & Grassland |
| 5) Freshwater (non-forested) Wetlands | 14) Nearshore Gulf Systems |
| 6) Tallgrass Prairie | 15) Caves |
| 7) Open Bay Systems | 16) Reservoirs |
| 8) Barrier Islands & Beaches | 17) Agricultural Lands |
| 9) Aquifers, Springs and spring-runs | |

GCP LCC Habitat Descriptions: Complete descriptions of the GCP LCC broadly defined habitats are under development with condensed descriptions included below. This is followed by a matrix that identifies the linkages between habitats and focal species.

- 1) **Tidal Wetlands:** include tidally influenced riverine systems, including vegetated emerging deltas and non-vegetated deltas. It includes fresh to saline tidal marshes, saline coastal prairie, and salt flats of the Laguna Madre.
 - a. Focal species: river prawn, alligator gar, gulf menhaden, blue crab, Penaeid shrimp⁷, diamond-backed terrapin, American oyster, mottled duck
- 2) **Floodplain Forests, Swamps & Riparian Systems:** includes areas adjacent to streams and rivers and defined by the overbank flooding of adjacent aquatic areas as well as forested areas inundated with water throughout the growing season. This includes the

⁷ Penaeid shrimp includes Brown shrimp, White shrimp and Pink shrimp.



- bald-cypress and bottomland hardwood systems that occur within the *Southern Floodplain Hardwood Forest* macro-group.
- a. Focal species: red-billed pigeon, black-capped vireo, golden-cheeked warbler, little blue heron, Rafinesque's big-eared bat, alligator gar
- 3) Rivers & Lakes:** this habitat includes the medium and large rivers included in TNC Classifications 4 and 5 (cumulative drainage area of 3,000-10,000 km² and more than 10,000 km², respectively) as well as the oxbow lakes formed by those rivers. Rivers are typically defined as the large natural streams of water flowing in a definite course or channel or series of diverging and converging channels that empty into an ocean, lake, or other body of water and that is usually fed along its course by converging tributaries.
- a. Focal species: alligator gar, broadcast-spawning prairie minnows⁸, *Quadrula* spp⁹, river prawns, Guadalupe bass, white bass
- 4) Headwaters & Streams:** encompasses the river sources, creeks and small rivers. Headwaters are the furthest place in the river from its estuary or confluence with another river, typically have a cumulative drainage area of less than two hundred square kilometres (<200 km²) and line up with TNC classification 1. Streams can be perennial or intermittent and include with TNC classifications 2 and 3 (cumulative drainage area of 200-700 km² and 700-3,000 km², respectively).
- a. Focal species: *Quadrula* Spp., Guadalupe bass, broadcast-spawning minnows, river prawns
- 5) Freshwater (non-forested) Wetlands:** these include the non-forested wetlands across the GCP LCC. This habitat includes wet meadows and marshes, depressional wetlands and coastal prairie sloughs.
- a. Focal species: northern pintail, mottled duck, little blue heron
- 6) Tallgrass Prairie:** includes the Texas black land prairie on the eastern edge of the LCC, the Great Plains tallgrass prairie, and the Texas-Louisiana coastal prairie systems. The coastal grassland specifically is distinguished by the inclusion of islands or ridges surrounded by marsh and it includes the central Texas coastal prairie riparian areas and may also include baygalls or bayhead swamps.
- a. Focal species: Eastern meadowlark, Northern bobwhite, crawfish Frog, mottled duck

⁸ Guild represented by Small eyed shiner (*Notropis buccula*), Red River shiner (*N. bairdi*), Sharpnose shiner (*N. oxyrhynchus*), Arkansas river shiner (*N. girardi*), Chub shiner (*N. potteri*), Silverband shiner (*N. shumardi*), Tamaulipas shiner (*N. braytoni*), Rio Grande shiner (*N. jemezianus*), Sabine shiner (*N. sabiniae*), all *Macrhybopsis* spp. including the *M. species* clade and Silver Chub (*M. storeriana*), Plains minnow (*Hybognathus placitus*), Rio Grande silvery minnow (*H. amarus*), and Mississippi silvery minnow (*H. nuchalis*).

⁹ *Quadrula* spp. Includes: the golden orb, smooth pimpleback, Texas pimpleback, winged mapleleaf, and wartyback.



- 7) **Open Bay Systems:** this habitat includes Sub-tidal Aquatic Vegetation (SAV), seagrasses, sub-tidal oyster reefs and non-vegetated bay bottoms. Important fish and invertebrates can be found in open water habitats although many also depend on other aquatic habitats such as seagrass and oyster beds.
- Focal species: gulf menhaden, sea turtles¹⁰, Penaeid shrimp, American oyster, alligator gar, blue crab, brown pelican, and black skimmer
- 8) **Barrier Islands & Beaches:** this focal habitat includes Louisiana beaches, Texas Coastal Bend Beach, and the Upper Texas Coast Beach. Barrier Islands may include beaches and dunes along with swales and flats, salt marshes and mangroves, and sub-tidal flats.
- Focal species: black skimmer, sea turtles, brown pelican
- 9) **Aquifers, Springs & Spring-runs:** These essential water features are combined into this habitat because of the linkages between them. Aquifers are natural chambers in the earth developed within karst systems where water is present. Springs are natural discharges of water in the form of leakage or overflow from an aquifer through a natural opening in the soil or rock formation onto land or into a body of water; spring-runs systems are permanent flowing streams immediately downstream of the spring source.
- Focal species: Dionda spp¹¹, Eurycea spp.¹² and Guadalupe bass
- 10) **Mixed Deciduous & Juniper Woodlands:** this system is focused on the Comanchian Forest and Woodlands macro-group of the deciduous dominated forests and woodlands of the Edwards Plateau area of west Texas.
- Focal species: golden-cheeked warbler, black-capped vireo
- 11) **Oak Hardwood & Pine Forests:** includes the Cross Timbers area and forests dominated by white and red oak with some pine at the eastern edge of the LCC. It includes the short, stunted woodlands and forests of eastern Oklahoma, ranging north to southeastern Kansas, and south to the inner coastal plain of central Texas. This habitat also extends into the longleaf pine at the edge of the LCC as well as broadleaf forests (live oak), loblolly and shortleaf pine, oak forest and woodlands (Bastrop Pines).
- Focal species: Rafinesque's big-eared bat, Northern bobwhite

¹⁰ Sea turtles includes the Green Sea Turtle and the Kemp's Ridley Sea Turtle.

¹¹ Dionda spp includes: Devil's River Minnow, Manantial Roundnose Minnow, Nueces Roundnose Minnow, Spotted Minnow, Guadalupe Roundnose minnow and Roundnose Minnow.

¹² Eurycea spp. includes: Salado Springs salamander, Cascade Caverns salamander, San Marcos salamander, Georgetown Salamander, Texas salamander, Blanco River springs salamander, Texas blind salamander, Blanco blind salamander, Barton Springs salamander, Jollyville Plateau Salamander, Comal blind salamander, Austin blind salamander.



- 12) Shrubland & Shortgrass (Mixedgrass) Prairie:** this habitat includes mixedgrass prairie, sand grassland, shortgrass prairie and associated shrubland. The mixedgrass system extends south from the Dakotas to the Edwards Plateau area. The mesquite woodlands and shrublands within the shortgrass prairie system dominate this focal habitat within the LCC. Typical plants for that area are honey mesquite, blue grama and buffalograss.
- Focal species: Eastern meadowlark, Northern bobwhite, black-capped vireo
- 13) Semi-desert Shrub & Grassland:** the system of most interest to the GCP LCC within this habitat is the Tamaulipan Scrub & Grassland, which includes the Tamaulipan Savanna Grasslands that are dominated by perennial grasses with sparse over-story of mesquite or oak trees and thornscrub.
- Focal species: white-tipped dove, Northern bobwhite, Eastern meadowlark, black-capped vireo
- 14) Nearshore Gulf Systems:** include the zone of the shore or beach that is regularly covered and uncovered by the rise and fall of the tide (foreshore) up to 5 fathoms deep. This habitat refers to the area from the beach outwards into the gulf.
- Focal species: sea turtles, Penaeid shrimp, American oyster, gulf menhaden, blue crab, brown pelican, black skimmer
- 15) Caves:** are developed within karst systems and are natural chambers in the earth in the absence of water. There are several prominent caves within the GCP LCC, many of which occur in the Edwards Plateau.
- Focal species: Brazilian (Mexican) free-tailed bat and Eurycea spp.
- 16) Reservoirs:** this habitat refers to the abundance of artificial reservoirs throughout the Gulf Coast Prairie LCC, recognizing that many of the 'lakes' typically thought of are actually reservoirs. The river-reservoir interface is an important area of focus for the focal species identified for this habitat.
- Focal species: alligator gar, white Bass
- 17) Agricultural Lands:** this includes cultivated cropland, introduced pasture and hay (that isn't covered in the previous grassland systems), aquaculture, and planted forests. Agriculture dominates the landscape and agricultural management practices influence many of the other habitats. Although not typically considered as ideal habitats these agricultural areas provide habitat for species depending on the management and type of agriculture (i.e. rice that provides wintering bird habitat vs. sugarcane that does not).
- Focal species: Northern bobwhite, Eastern meadowlark, northern pintail, mottled duck, crawfish frog

