



Figure 9. Location of the ecologically significant Rio Grande Segment (TNRCC segment 2302) between Falcon Dam and the Rio Grande Wier in Cameron County (Scale 0.25": 3 mi.; Base map source: TxDOT county files).

## **Rio Grande (downstream of International Falcon Reservoir)**

The Rio Grande, or the Rio Bravo del Norte as Mexico knows it, begins in the mountains of southern Colorado; flows through New Mexico, forms the international boundary between Texas and Mexico, and finishes its journey 2,000 miles downstream where it empties into the Gulf of Mexico. The river flows through several types of habitat which include deserts, wetlands, mountains, and subtropical coastal regions.

The role of the Rio Grande as a water supply and as an international boundary marks its uniqueness, but also poses an environmental challenge in protecting its water quantity and quality<sup>11</sup>.

The TNRCC stream segment 2302 of the Rio Grande runs from below Falcon Dam, in Starr County, at the International Falcon Reservoir downstream to the Rio Grande Wier, in Cameron County (Fig. 8). The ecological significance of this segment is based upon the following criteria:

1. Biological function - Priority riparian habitat, extensive freshwater wetland habitat<sup>12</sup> (Figs. 9 -23). Subtropical resaca woodlands and brushland of thicket-forming, thorny shrubs and small trees. The resaca banks support a luxuriant growth of cedar elm, anacua, ebony, hackberry, Mexican ash and tepequaje, a very large Mexican led tree. Bentsen-Rio Grande Valley State Park contains acres of resaca woodlands and brushlands.
2. Hydrologic functions - The riparian corridor on the floodplain performs a host of important hydrologic functions such as: downstream flood control and mitigation of storm damage; regulation of baseflows and protection of fisheries habitat; protection of public and private water supplies through pollution filtration; and regulation and protection of groundwater and baseflows in the river.
3. Riparian conservation area - Unique habitat<sup>13</sup>. Falcon Dam / The Falcon Woodlands (Figs. 9&10) is site LTC083 on the Great Texas Coastal Birding Trail (GTCBT); Lower Rio Grande Valley National Wildlife Refuge (LRGVNWR): from the Falcon Dam downstream to the mouth of the Rio Grande, the LRGVNWR is one of the most biologically diverse national wildlife refuges in the continental United States<sup>14</sup>. The LRGVNWR/Kepler tract at Salineno (Fig. 11) also is site LTC 080 on (GTCBT)<sup>7</sup>; Bentsen-Rio Grande Valley State Park (Figs. 14, 15): this is one of the best places in the United States to observe subtropical birds and wildlife that are more commonly found in Mexico<sup>15</sup>. It is site LTC 069 on the GTCBT. Unusual birds observed at Bentsen-Rio Grande Valley State Park include: paraque, groove-billed ani, green kingfisher, blue bunting, blackbellied whistling duck, claycolored robin, rose-throated becard, tropical parula and masked tityra. The park is also one of the last natural refuges in Texas for cats such as the ocelot and jaguarundi ; Anzalduas County Park (Figs. 16, 17) is a multi-use park with some of the most significant stands of mature Rio Grande Ash and Live Oak in the Valley. The park is also site LTC 0068 on the GTCBT; Santa Ana National Wildlife Refuge (NWR) is site LTC 059 on the GTCBT. With its unique mosaic of temperate and tropical plants, the 2,088-acre Santa Ana NWR features an amazing variety of plants and animals<sup>16</sup>. Riparian woodlands and brushlands attract migrating songbirds in the spring (Texas Parks and Wildlife Department 2000). Las Palomas WMA Anacua (Fig. 21) and Resaca de la Palma (Figs. 22, 23) Units are also sites LTC 051 and LTC 048 respectively. The Great Texas Coastal Birding Trail sites are many on this section of the Rio Grande. Some of them are not designated conservation areas such as site LTC 078 at Fronton (Fig.12), and site LTC 077 at Roma Bluffs / the Roma Historic District (Fig.13).
4. High water quality/exceptional aquatic life/high aesthetic value- Overall use<sup>17</sup>; Benthic macroinvertebrates<sup>5</sup>. Popular fish in this segment include bass and catfish<sup>15</sup>. High economic value for outdoor recreation associated with fishing, boating, and birding in this segment.
5. Threatened (T) or endangered (E) species/unique communities- The following rare species associated with aquatic or riparian habitats occur in or along this segment: the black spotted newt (St. T), Mexican treefrog (St. T), sheep frog (St. T), South Texas siren (St. T) (large form), and white-lipped frog (St. T); the Audubon's oriole, brown pelican (Fed. E & St. E), Brownsville common yellowthroat, cactus ferruginous pygmyowl (St. T), common black hawk (St. T), northern

beardless-tyrannulet (St. T), piping plover (Fed. T & St. T), reddish egret (St. T), rose-throated becard (St. T), Sennett's hooded oriole, tropical parula (St. T), and wood stork (St. T); Coues' rice rat (St. T), ocelot (Fed. & St. E), jaguarundi (Fed. & St. E), southern yellow bat (St. T), and white-nosed coati (St. T); Texas hornshell; indigo snake (St. T), speckled racer (St. T), and the plant Texas ayenia (Fed. E & St. E)

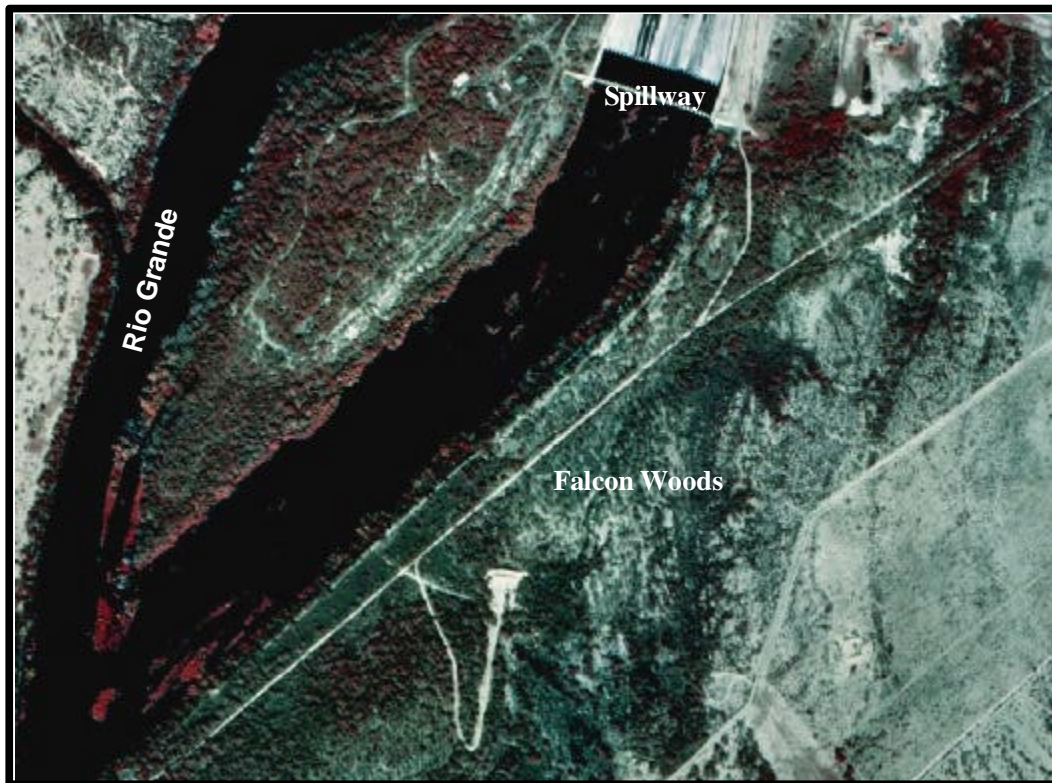


Figure 10. Forested riparian habitat along the Rio Grande below International Falcon Reservoir  
Source: Falcon Village DOQ; 1995; 1m, CIR





Figure 11. Falcon Woodlands and freshwater wetlands downstream from International Falcon Reservoir, Starr County, Texas.



Figure 12. The LRGV NWR/Kepler tract at Salineno, Starr County, Texas. Note the excellent riparian woodlands and heavy waterfowl use of the Rio Grande



Figure 13. The Rio Grande at Fronton, Starr County, Texas. GTCBT site LTC 078.



Figure 14. The Rio Grande at Roma Bluffs, Starr County, Texas. GTCBT site LTC 077.





Figure 15. Riparian corridor along the Rio Grande in Hidalgo County, Texas at Bentsen- Rio Grande State Park Source: La Joya DOQ; 1995; 1m, CIR.



Figure 16. Resaca riparian habitat on Bentsen- Rio Grande State Park



Figure 17. Riparian habitat along the Rio Grande below McAllen, Texas at Anzalduas Dam and County Park. Source: Mission DOQ; 1995; 1m, CIR



Figure 18. Anzalduas County Park forested bottomland.





Figure 19. Extensive riparian habitat along the Rio Grande, Hidalgo County, Texas.  
Source: Las Milpas DOQ; 1995; 1m, CIR.



Figure 20. Riparian forest along the Rio Grande Santa Ana National Wildlife Refuge.





Figure 21. An extensive marsh/swamp habitat at Santa Ana National Wildlife Refuge.



Figure 22. The Rio Grande as seen from Las Palomas WMA - Anacua Unit





Figure 23. Resaca de la Palma Unit of Las Palomas WMA



Figure 24. Black-necked stilts feeding in freshwater habitat associated with Resaca de la Palma.