

Figure 2. Ecologically significant Medina River segment (TNRCC classified stream segment 1905) and West Verde Creek segment in Bandera County (Scale: 1 inch = 3.5 miles; Base map source: TxDOT County files)<sup>18</sup>.

### Medina River

The Medina River rises in the northwestern part of Bandera County and flows southeast through the county, past the City of Bandera, to Medina Lake. The ecologically significant segment runs from a point immediately upstream of the confluence with Red Bluff Creek in Bandera County upstream to the confluence of the North Prong Medina River and the West Prong Medina River in Bandera County (Fig. 2). The Medina River is a small stream with crystal clear water and many limestone outcrops and numerous small rapids. It flows through a scenic part of the Hill Country. The ecological significance of this segment is based upon the following criteria:

1. Biological function – The aquatic and riparian habitats (Fig.3) associated with the stream support an exceptionally diverse assemblage of invertebrates, fish, reptiles, and birds characteristic of the Edwards Plateau ecoregion. Willows, sycamore, bald cypress, and pecan dominate the riparian gallery forests. The surrounding slopes are dominated by plateau live oak and Ashe juniper.
2. Hydrologic function – The entire drainage basin of the Medina River in Bandera County is within the Edwards Aquifer drainage area. The river crosses the Edwards Aquifer recharge zone in Medina County. The flows of this segment are impounded by Medina Lake and put to municipal, agricultural, and recreational uses. The Medina River is a tributary of the San Antonio River, which is a tributary of the Guadalupe River, and therefore contributes fresh water inflow to San Antonio Bay, one of the state’s major estuaries. The

riparian habitats of the river function to improve the quality of runoff and groundwater discharge into the river, attenuate peak flood flows, and to some extent, stabilize base flows.

3. Riparian conservation area – Bandera City Park (Fig.4) has been nominated for inclusion in the Heart of Texas Wildlife Trail as has a private tract called the Upper Medina River Trail.
4. High water quality/exceptional aquatic life/high aesthetic value – This segment has been nominated for inclusion in the proposed Texas Natural Rivers System and is the fourth most popular for floating in Texas<sup>14</sup>. The segment has been identified as an Ecoregion Stream<sup>1</sup>. The waters are designated by TNRCC for contact recreation, public water supply, and exceptional aquatic life uses<sup>19</sup>. This segment has good potential to contribute to the regional economy by providing birdwatching opportunities.
5. Threatened or endangered species/unique communities<sup>17,23</sup> – The following rare species associated with aquatic or riparian habitats occur in or along this segment: the Golden-cheeked warbler (Fed.E, St.E), Black-capped vireo (Fed.E, St.E), and Zone-tailed hawk (St.T) use riparian forests for nesting, although they are not restricted to these habitats. The state fish, the Guadalupe bass, is endemic to the headwaters of perennial streams of the Edwards Plateau ecoregion. The Tobusch fishhook cactus (Fed.E, St.E) is occasionally found in gravels along creek bottoms.

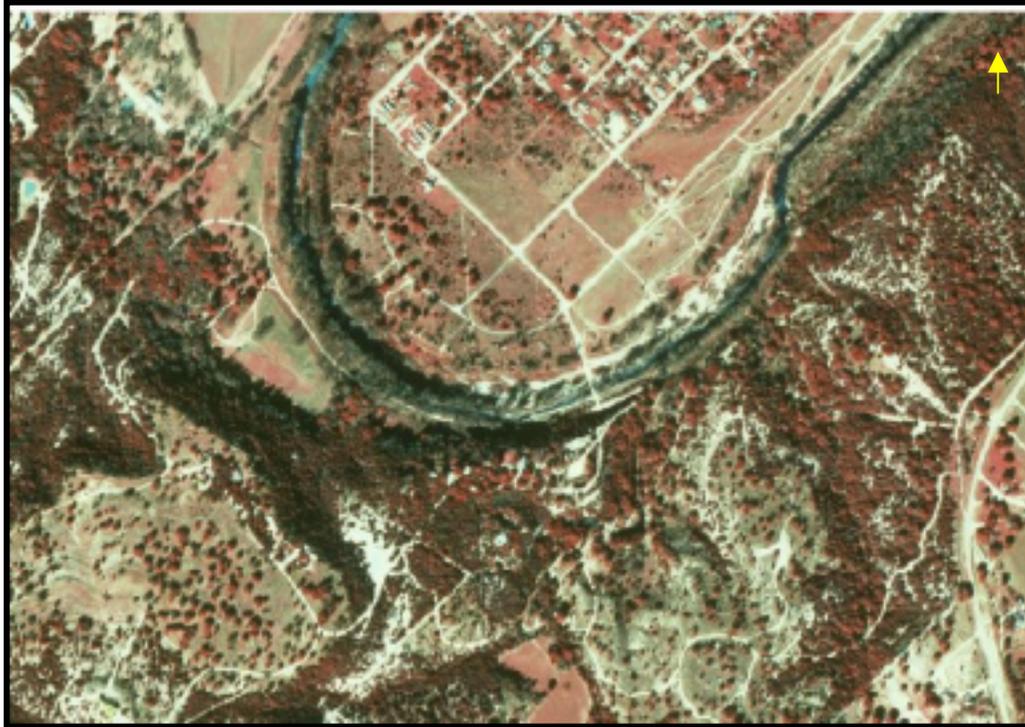


Figure 3. Riparian forested habitat along the Medina River at Bandera, Texas.  
Source: Bandera DOQ, 1995, 1m CIR<sup>20</sup>.



Figure 4. Medina River at Bandera City Park from SH 173 bridge (11/20/00).