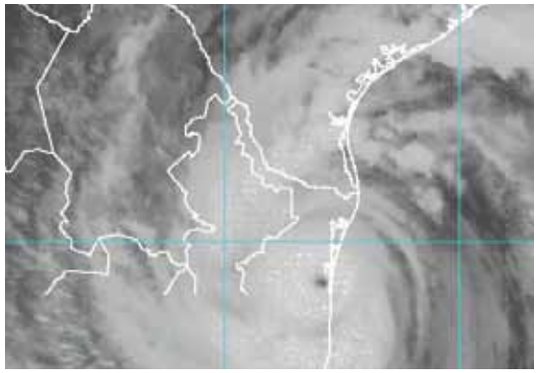
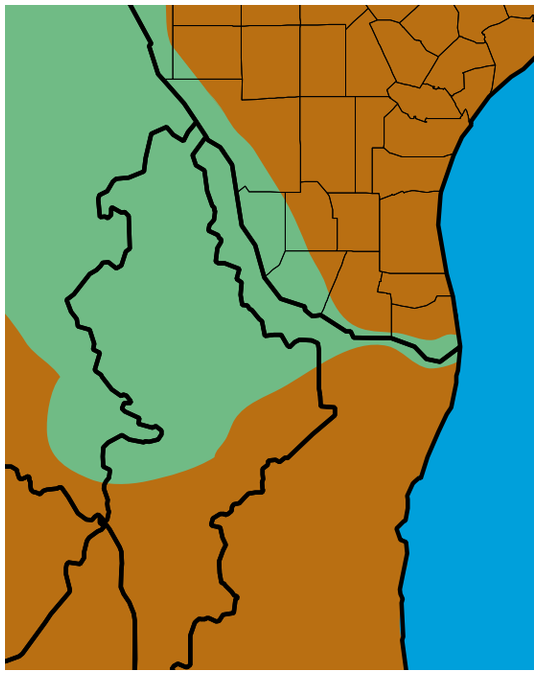
The Rio Grande River Floods the National Butterfly Center

by Pat Wogan

Jeffrey Glassberg





Above left: The storm track of Hurricane Alex. Color shows storm intensity with blue indicating a tropical depression, cream a category 1 hurricane and yellow a category 2 hurricane.

Above right: A satellite photo of Hurricane Alex as it made landfall.

Right: A map of the Rio Grande Watershed in extreme southern Texas and northeastern Mexico.

Overleaf: A view of the southern portion of the National Butterfly Center on July 19, 2010.

In late June, 2010, Tropical Depression Alex formed in the Atlantic. Moving into the Gulf of Mexico, Alex moved rapidly toward northeastern Mexico and became Hurricane Alex on June 30. Intensifying as it approached land, the storm made landfall near Soto la Marina in the state of Tamaulipas, Mexico with sustained winds of more than 100 miles per hour.

Rainfall in McAllen, Texas, about 6 miles from the National Butterfly Center, amounted to almost 7 inches on June 30, 2010. Over the course of the next week, 6 to 12 inches of rain fell throughout the Lower Rio Grande Valley, with even greater rainfall in nearby northern Mexico.

Although the hurricane's high winds and heavy rainfall led to immediate damage, including flooding on South Padre Island, it was the later effects of the hurricane's rainfall that caused more serious problems in south Texas.

The Rio Grande River Watershed, the life blood of extreme south Texas, drains only a thin sliver of land here, but drains a much larger area in northern Mexico. The torrential rains over the watershed area led to huge amounts of water flowing into the Rio Grande.

Years of severe droughts had lowered water levels in reservoirs along the Rio Grande, but recently rains had become more frequent and the reservoirs had begun to

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Left: An interpretive kiosk on the south side of the National Butterfly Center, just south of the levy, was destroyed by the flooding. July 19, 2010.

Left: Volunteers constructing the same interpretive kiosk in 2009. One can estimate the depth of the flooding water at this point by comparing the two photos. It looks to be about five and one-half feet.

rise. Then came Alex. On July 15, 2010, water levels at Falcon Reservoir, about 50 miles northwest of the National Butterfly Center, reached a new record level. Faced with possible structural damage to the dam and massive flooding, the International Boundary and Water Commission was forced to release significant amounts of water from the reservoir. These waters flowed into a floodway near Mercedes (about 30 miles southeast of the National Butterfly Center).

Within a few days, it became clear that the capacity of the floodway was less than was needed. Unless a new tact was taken, water would overflow the bridges and also flood expressway 83, the major East-West route in the Lower Rio Grande Valley.

Thus the International Boundary and Water Commission decided to close the dam at Anzalduas (about 3.5 miles southeast of the National Butterfly Center) and release water from the Amistad and Falcon Reservoirs.