



## Story of Tucson's past in sediment

Posted: Wednesday, March 5, 2008 12:00 am

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Residents on the Southwest Side of Tucson have probably noticed a large amount of construction along the Santa Cruz River between Drexel and Irvington roads. As part of a rezoning agreement between the city of Tucson and the developer of the Tucson Spectrum Shopping Center, this reach of the Santa Cruz River is being channelized and stabilized with bank protection.

Although this construction will help with flood control and include a river park, I can't help but feel somewhat sad that we have lost another piece of Tucson history.

Prior to construction, this reach of the river contained tall, vertical walls of earth, in places over 20 feet high. These walls were remnants of an arroyo, a steep-sided channel that formed in the 1890s when a combination of ill-advised canal excavations and large floods caused the river to incise its floodplain.

By 1915, a continuous arroyo extended from "A" Mountain to the San Xavier Indian Reservation. Previous to this erosion, the Santa Cruz River was lined with cottonwoods and several segments flowed year-round.

Water tables were at or near the surface and irrigation canals sustained a tapestry of agricultural fields. With arroyo cutting came destruction of canals, bridges and pipelines, and as the channel incised, local water tables lowered and wetlands disappeared.

However, it's not just Tucson's recent past that the arroyo walls represented. Exposed in those walls were more than 5,000 years of floodplain history. Over the past three years, I have worked with archaeologists describing, documenting and dating the layers of sediment exposed along this reach of the Santa Cruz.

The archaeologists are interested because these layers (or stratigraphy) tell us something about past environments within the floodplain where people have practiced agriculture for more than 4,000 years.

Prior to this channelization, one could glance up at these arroyo walls and see chocolate brown clays with snail shells indicating former marshes, or thick layers of sand produced by large floods. Also visible in the sediments were broken pieces of pottery and the hearths of ancient campfires.

The stratigraphy also tells us that the Santa Cruz River has entrenched its floodplain at least six times in the past 4,000 years. Interestingly, some of these arroyo-cutting events coincided with the abandonment of Hohokam settlements, suggesting the possibility that arroyos destroyed their canals and fields, limiting their ability to grow food.

Although we have lost another window into Tucson's past, a few arroyo walls still remain along the Santa Cruz. If by chance you happen to walk by one, see if you can recognize the dark clays of ancient marshes or the outlines of Hohokam canals. The layers of earth exposed in arroyo walls provide us a way to travel back in time and imagine what it was like to live next to an oasis in the desert.

