

Colorado River Geomorphology

Longhorn Dam to US183
at Roy G. Guerrero Colorado River Metro Park
Austin, TX

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City of Austin Watershed Protection Department
Parks Board Meeting 06/24/2014



Legend

- City of Austin Parks
- Parkland Encasement
- Creeks
- Water Operating/Valve
- ▲ Fire Hydrant
- Lead Main
- Water Main
- WW Gravity Main
- WW Force Main
- WW Manholes

1 in = 250 ft

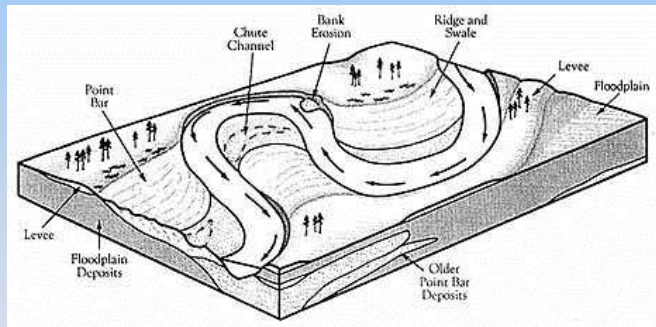
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08 April 2014 MS

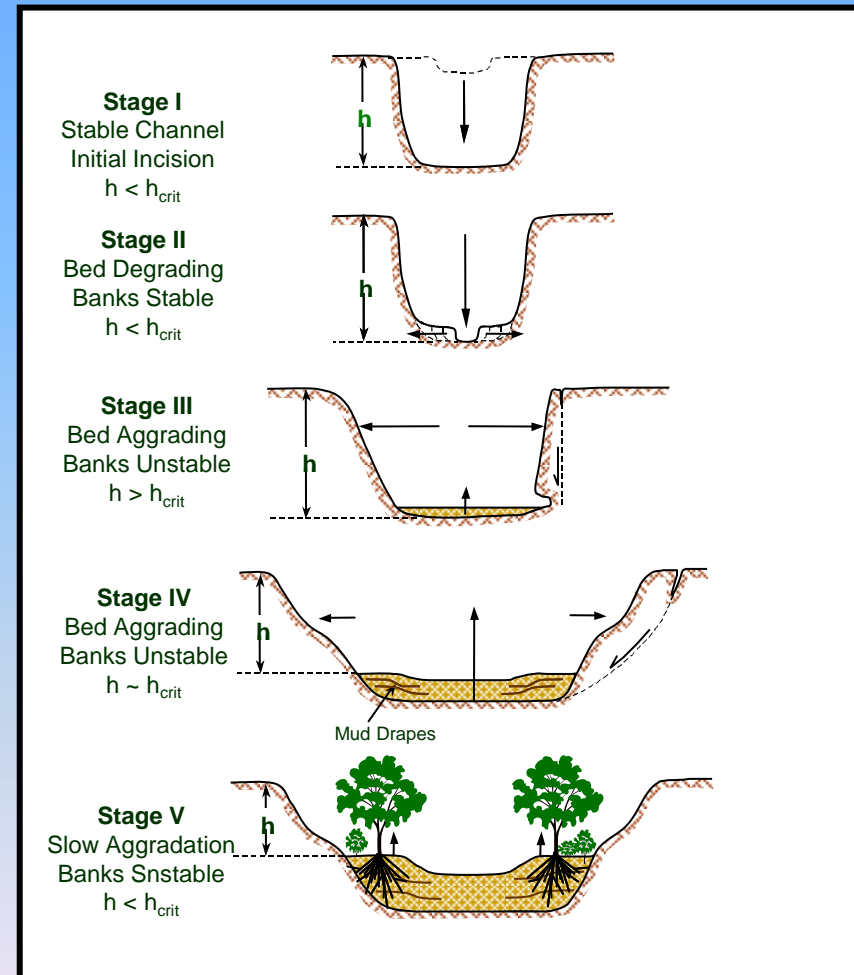
Roy G. Guerrero Park

Background - Rivers are Dynamic

- They adjust their size, shape and location through
 - Meandering

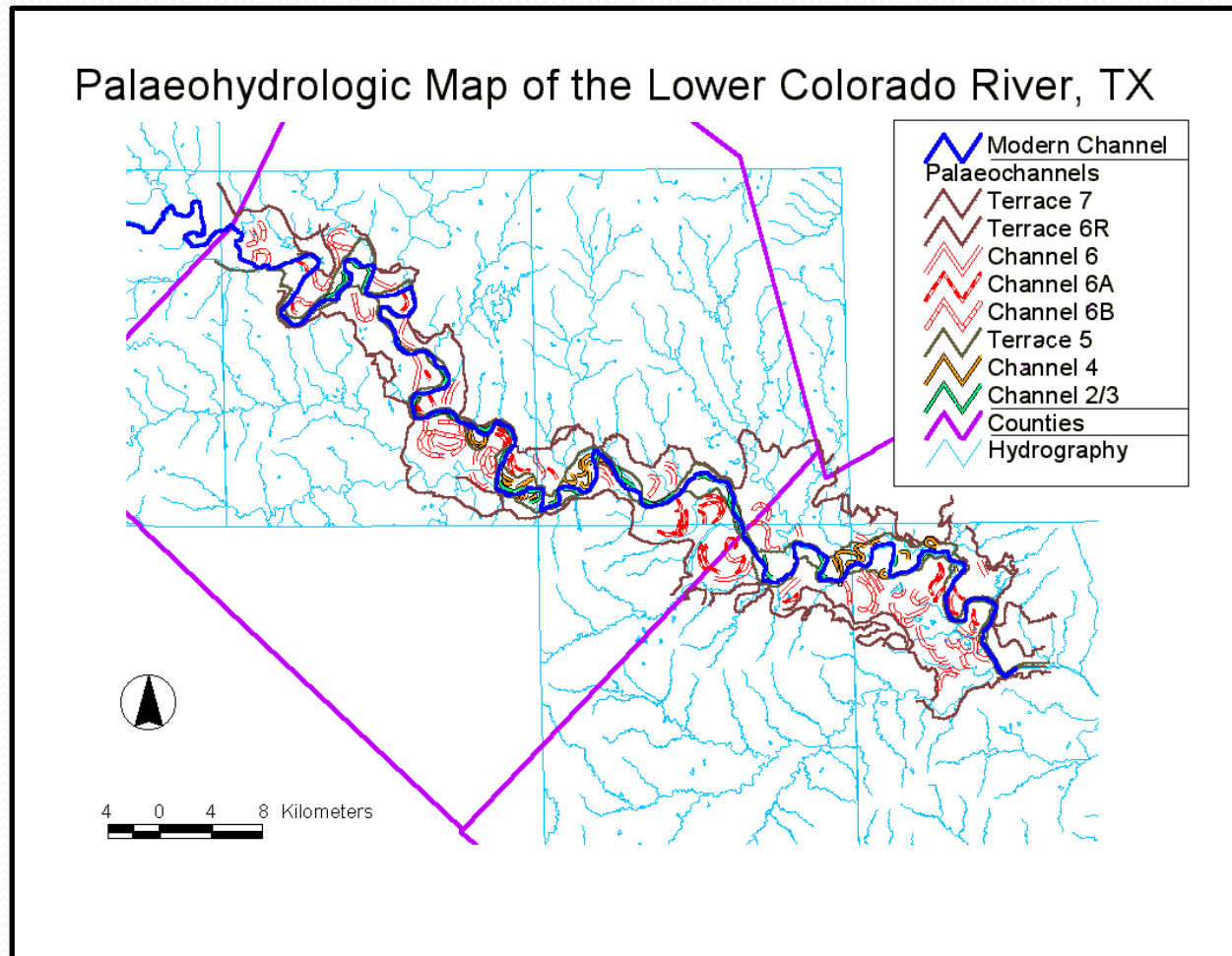


- Downcutting
- Widening



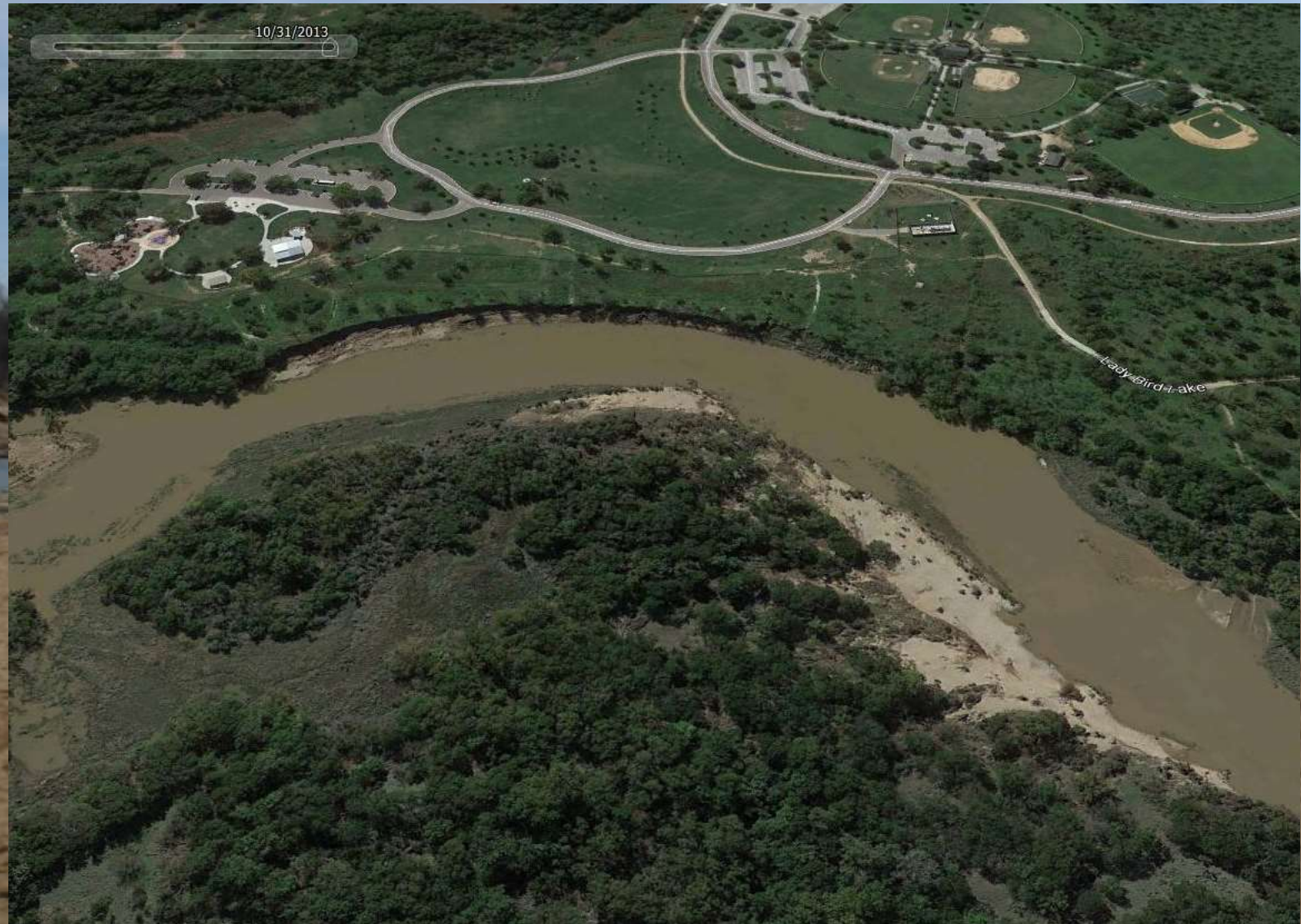
The Colorado River in Texas

- Highly variable geology from northwest to southeast
- A series of channels over time
- More erodible east of Austin
- Erosion rates impacted by geologic, climatic and anthropogenic changes



Colorado River

at Roy G Guerrero Colorado River Metro Park



Colorado River Bankline Changes

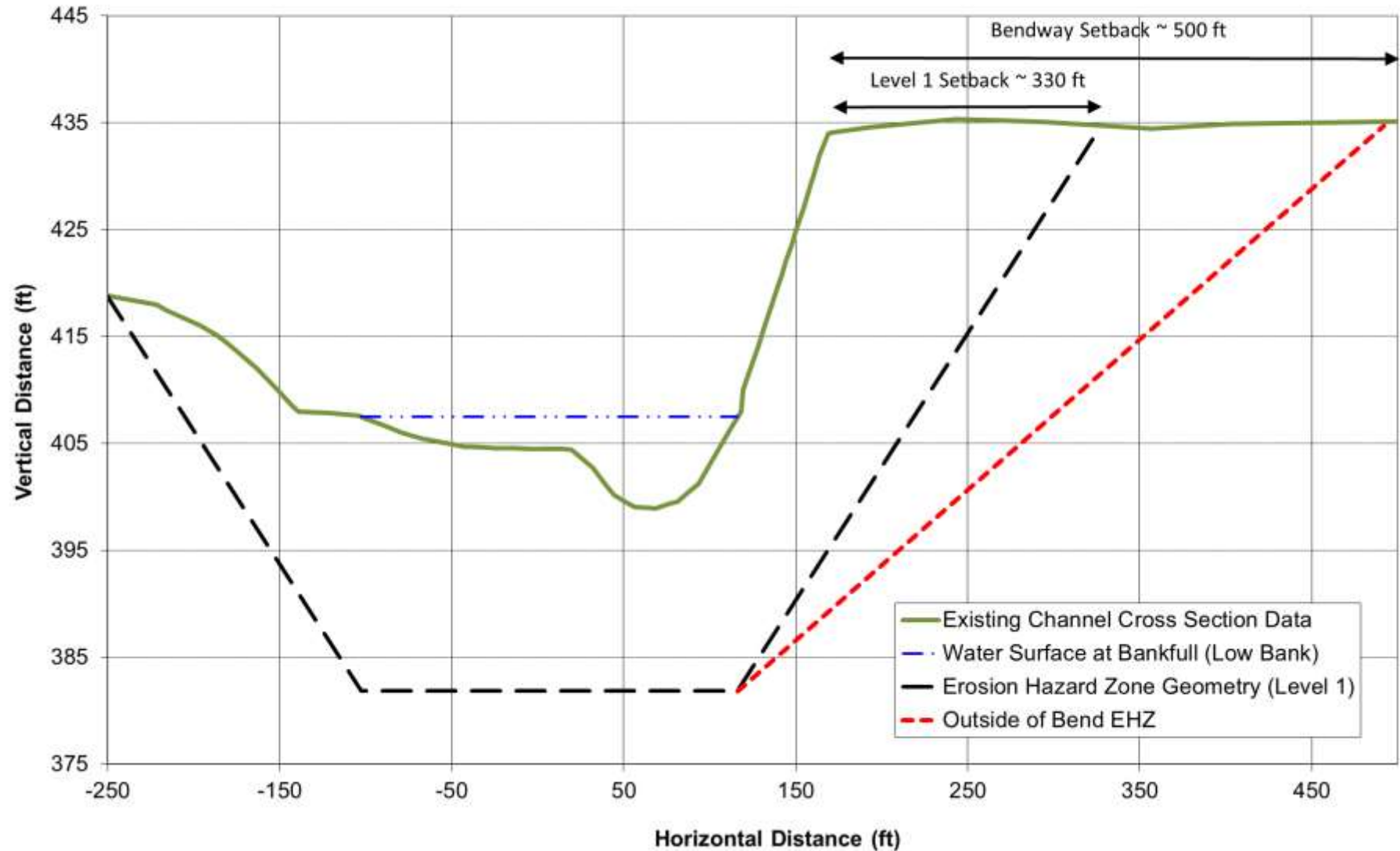


Colorado River Bankline Changes

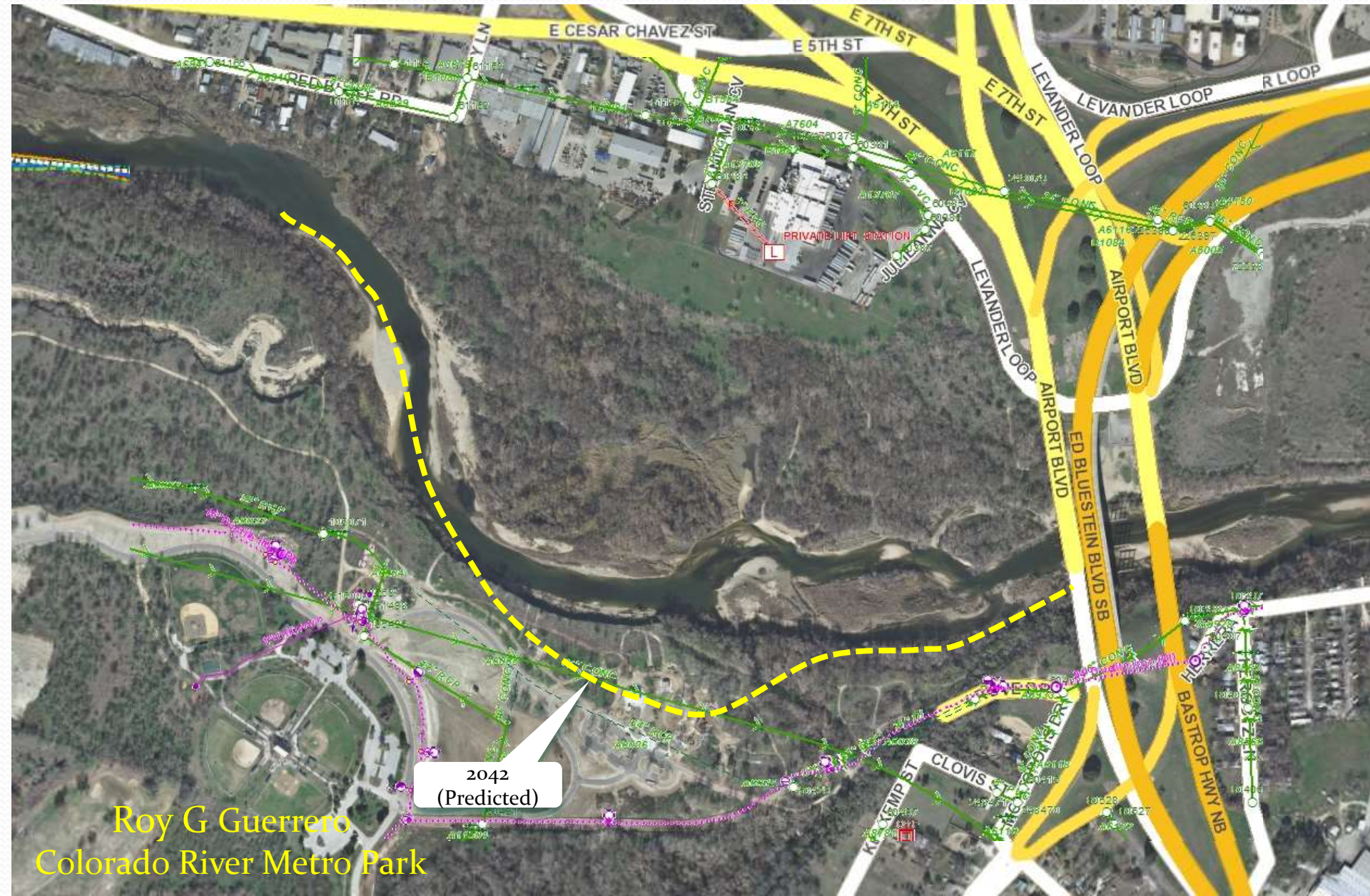


Erosion Hazard Zone Prediction

Colorado River - Longhorn Dam to US183 Erosion Hazard Zone Calculation



Forecasted Erosion – Colorado River



Roy G Guerrero

Colorado River Metro Park

Austin, TX - 2012

Summary

- Rivers are Dynamic (but somewhat predictable)
- The Lower Colorado River is more erodible than in the Upper Basin & Highlands
- Erosion on the Colorado River at Roy G. Guerrero Colorado River Metro Park will continue and may impact programmed park space and infrastructure in the future
- Future park space planning should consider this known process

Backup Information

Meander Trajectory Forecast

