

# Copano Bay Watershed Historical Data Review

---



**Sandra A. Alvarado**  
**Total Maximum Daily Load Program**  
**Texas Commission on Environmental Quality**



# Data Source

- Texas Regulatory Assessment and Compliance System (TRACS)
  - TCEQ Regions
  - Clean Rivers Program Partners - Nueces River Authority
  - Department of State and Health Services

# Period of Record

- All TRACS data available to date (May 2006)
- *Enterococcus* and *E. coli* data only available beginning in 1999 (when the indicator changed)
- Fecal coliform data exists dating back to early 1970s in some cases, but only extends through 2003

# Seasonality Defined

- Sampling frequency was quarterly at best
- Seasonality was defined as follows:
  - Spring – Mar, Apr, May
  - Summer – Jun, Jul, Aug
  - Fall – Sept, Oct, Nov
  - Winter – Dec, Jan, Feb

# Assessment Criteria for Contact Recreation Use in Tidal Waters

---

- Indicator bacteria is Enterococcus
- Fully supporting if geometric mean  $< 35$  cfu/100 ml and 25% of time or less, concentrations are  $< 124$  cfu/100 ml.
- Not supporting if geometric mean  $> 35$  cfu/100 ml, or if concentrations are  $> 124$  cfu/100 ml more than 25% of time.



# Assessment Criteria for Contact Recreation Use in Above Tidal Waters

---

- Indicator bacteria is *E. coli*.
- Fully supporting if geometric mean  $< 126$  cfu/100 ml and 25% of time or less, concentrations are  $< 394$  cfu/100 ml.
- Not supporting if geometric mean  $> 126$  cfu/100 ml , or if concentrations are  $> 394$  cfu/100 ml more than 25% of time.



# Assessment Criteria for the Oyster Waters Use

---

- Indicator for the oyster waters use is Fecal coliform
- Oyster Waters Use
  - Median  $\leq 14$  cfu/100 ml
  - No more than 10% of all samples  $> 43$  cfu/100 ml



# Copano Bay Watershed - Bacteria TMDL Project



May 25, 2006

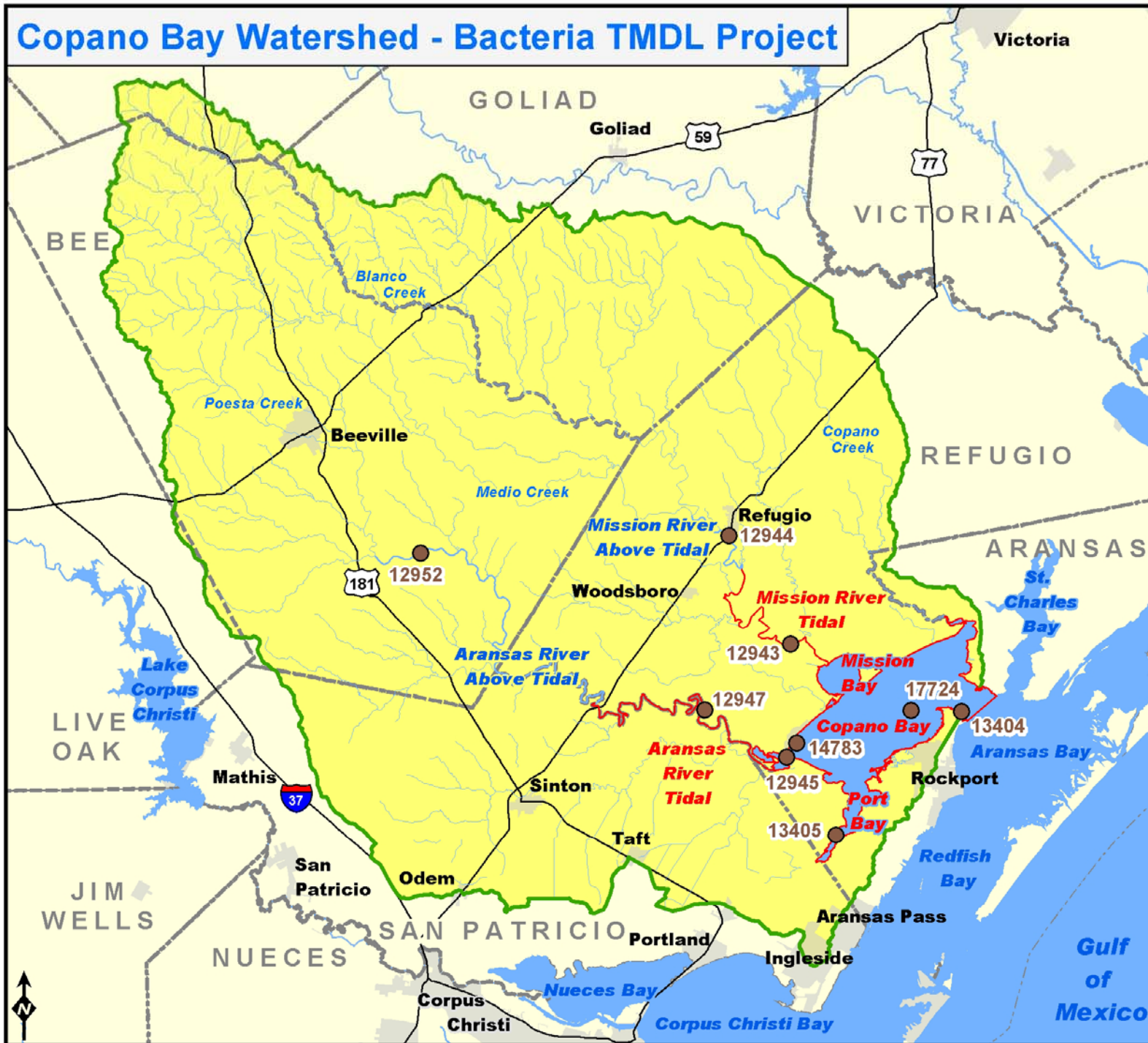


## Legend

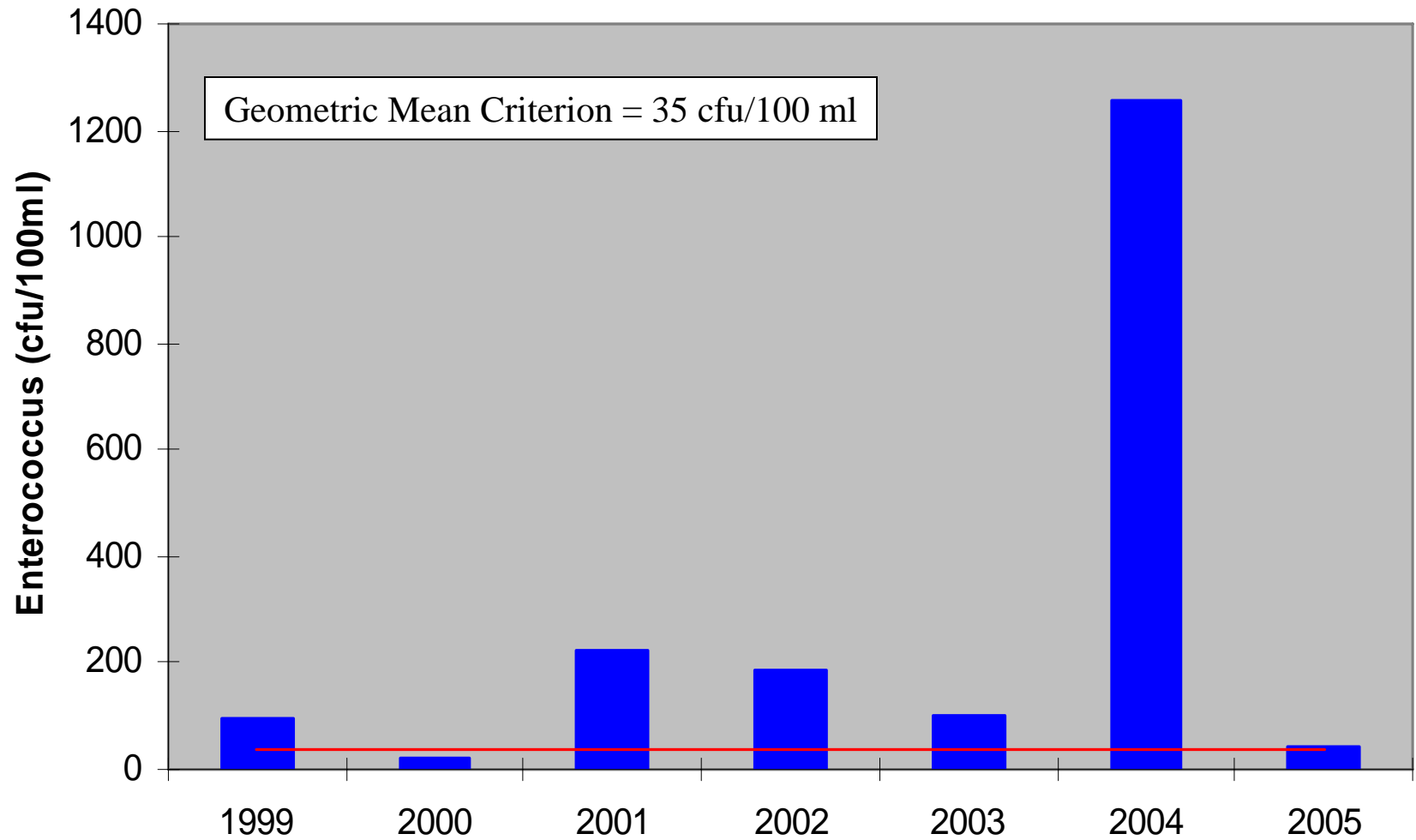
- Monitoring Stations
- Creeks
- Classified Streams
- Impaired Segment
- Highways
- Project Watershed
- Lakes and Bays
- Cities
- Counties

Miles  
0 2 4 8

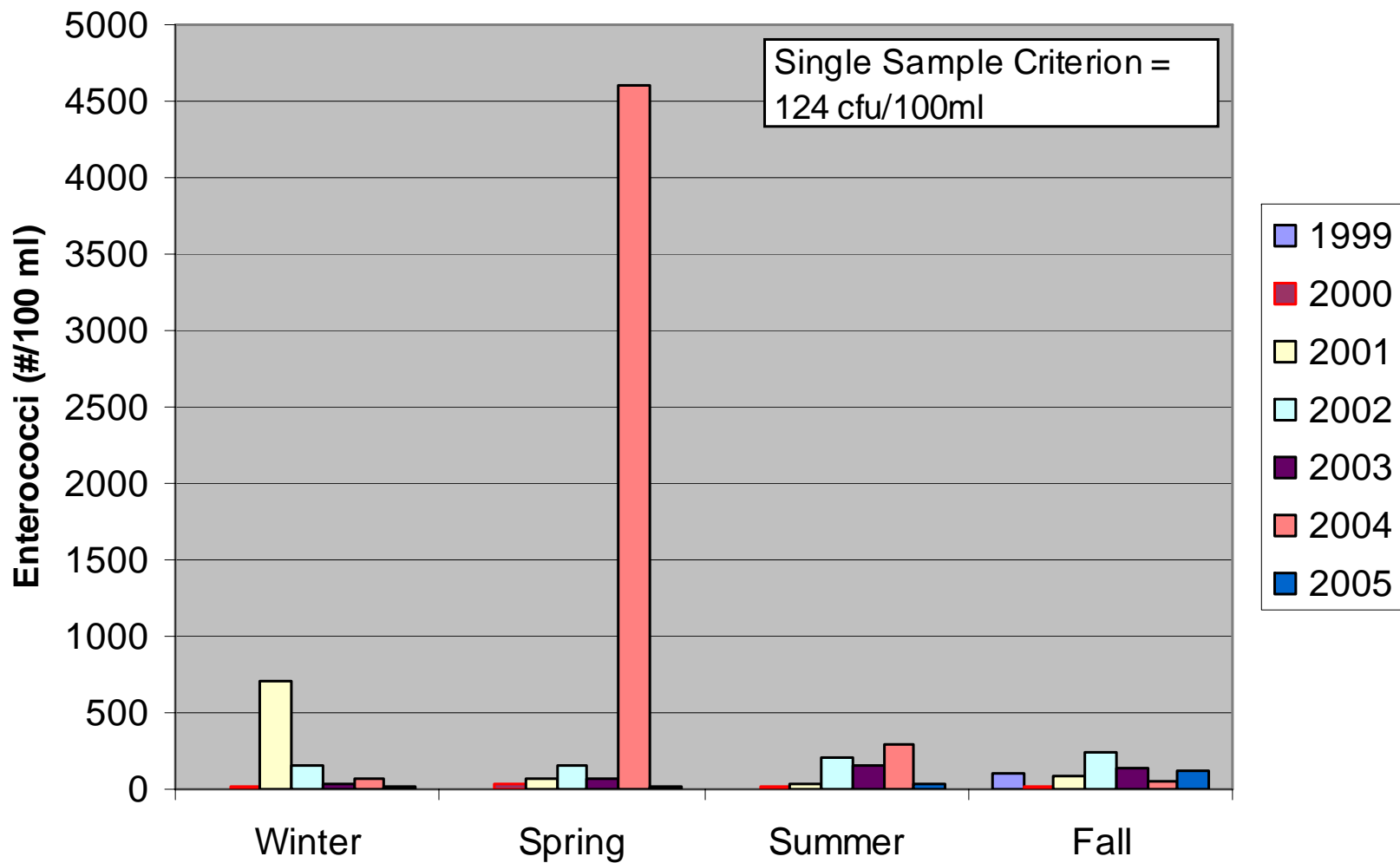
This map was developed by the TMDL Program of the TCEQ. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use.



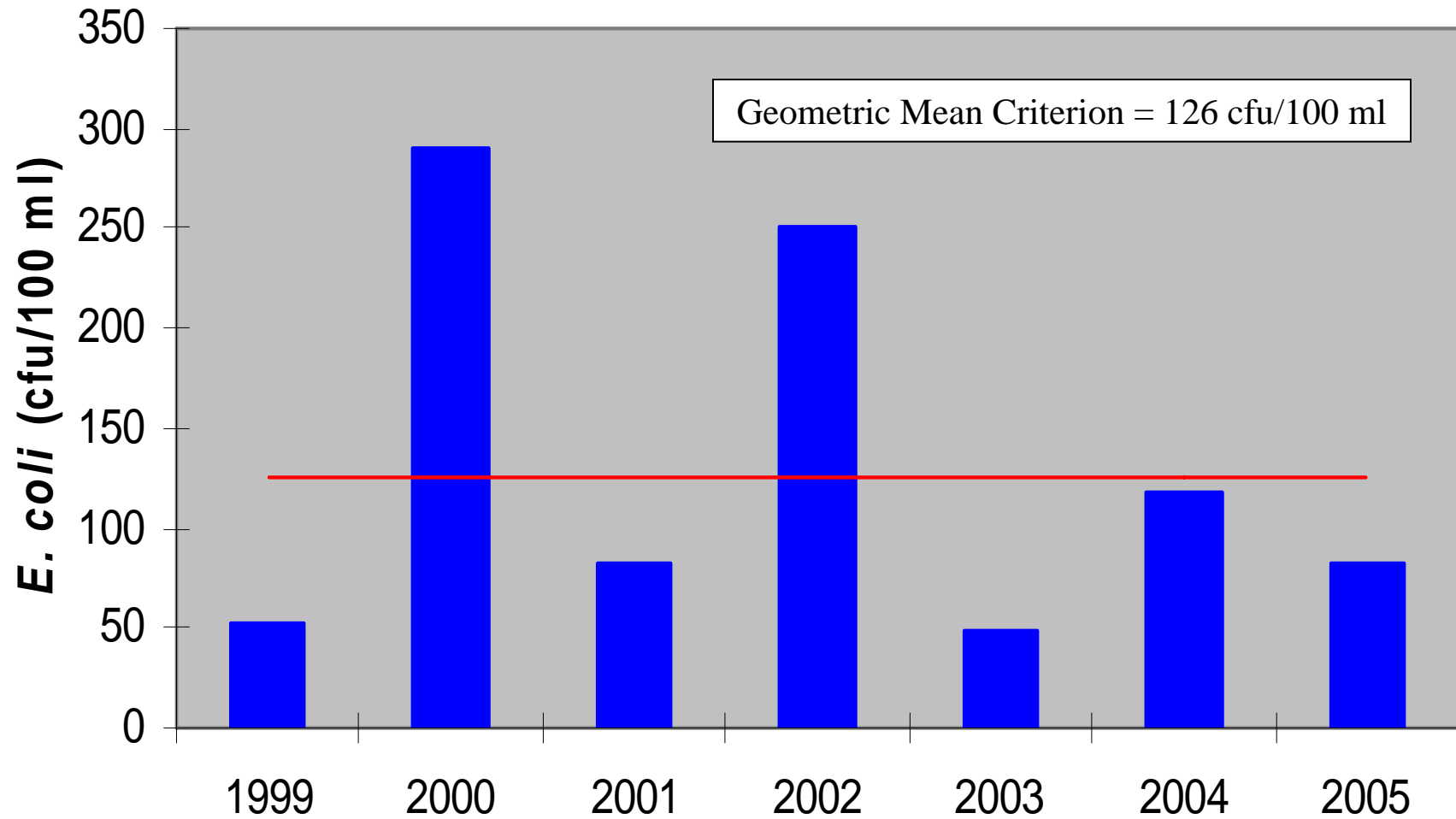
# Mission River Tidal



# Mission River Tidal



# Mission River Above Tidal



# Mission River Above Tidal

