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Creative Outreach: Solving the Conundrum of Using Volunteer Water Quality Data as a Meaningful Source of Information

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Lower Colorado River Authority

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Lower Colorado River Authority

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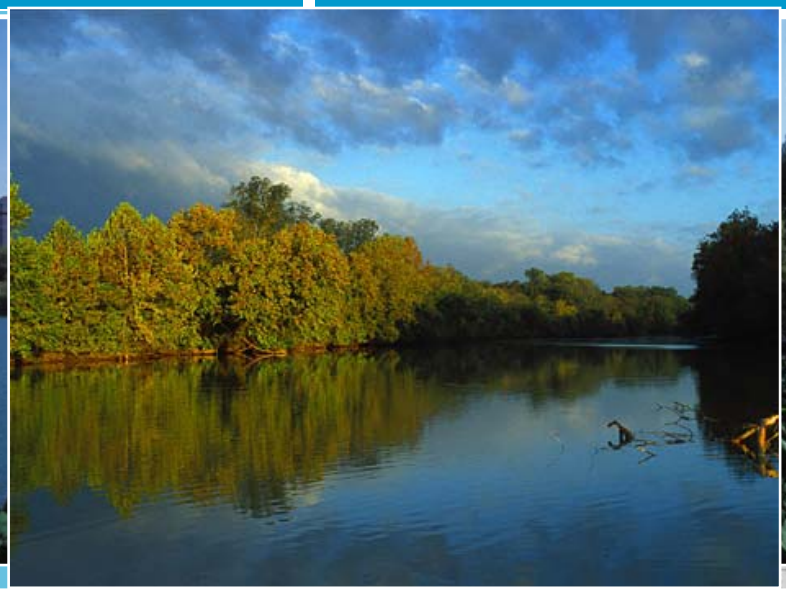

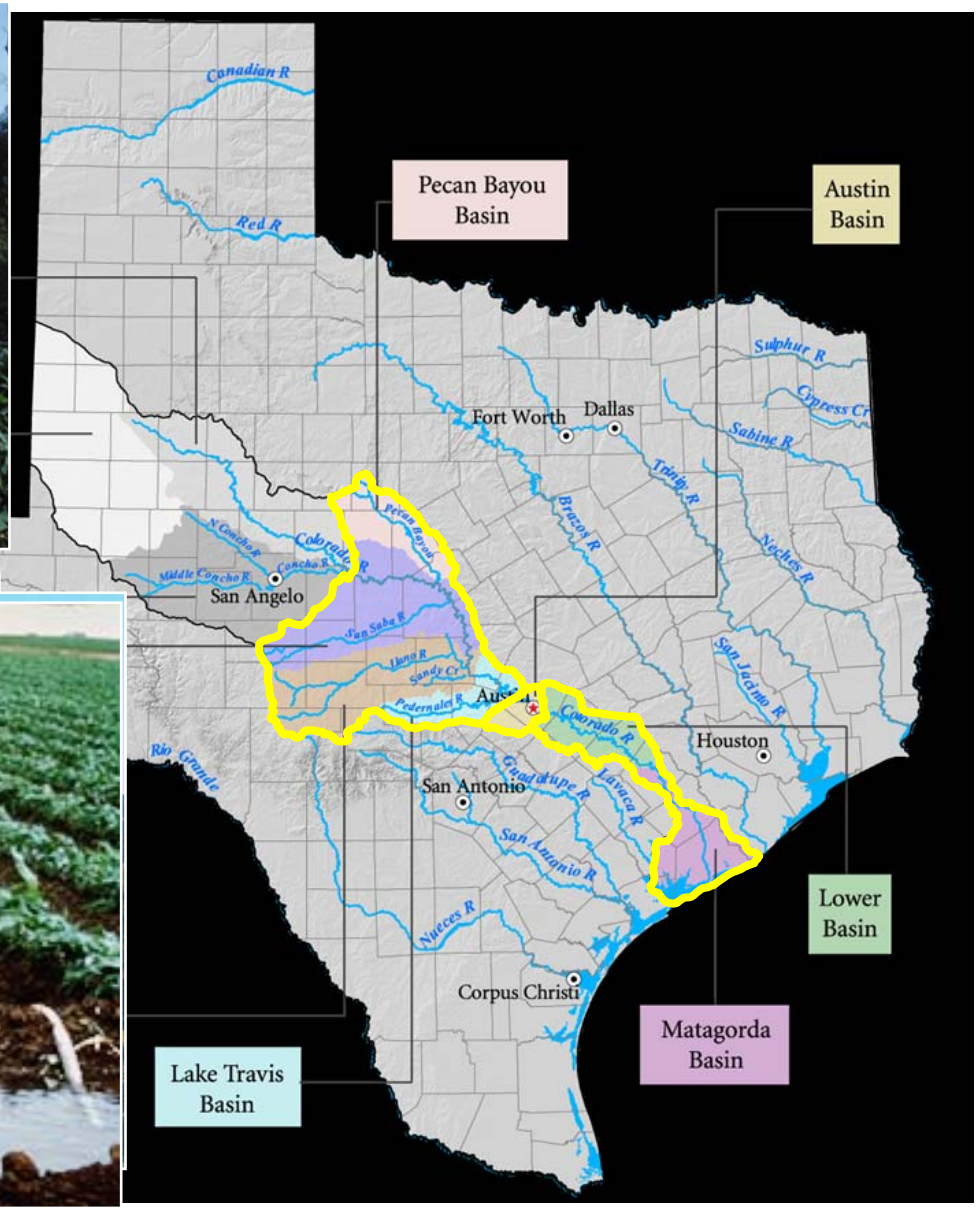

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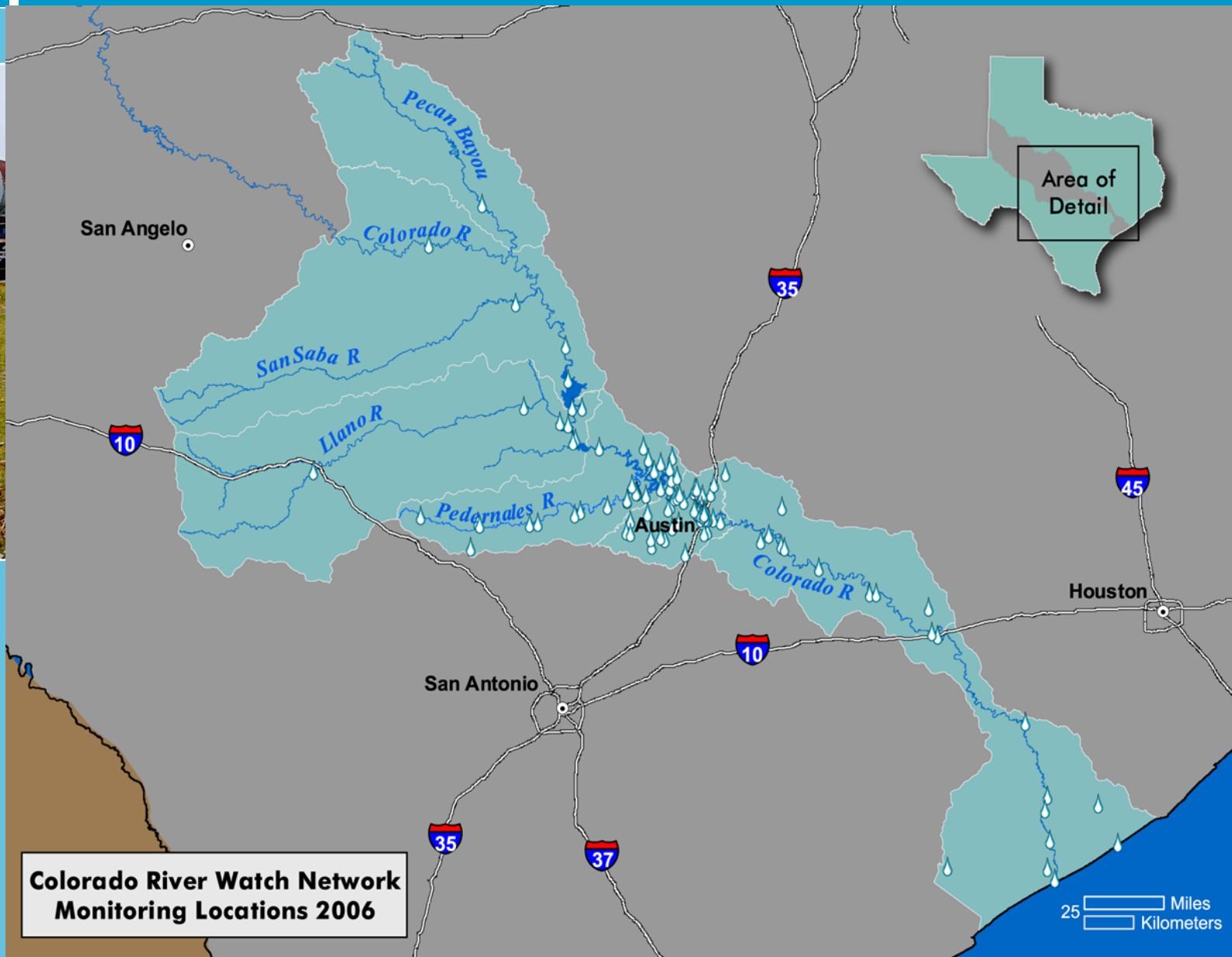


Volunteer Data Conundrum

Dedicated Volunteers

invest

Time and Effort

produce

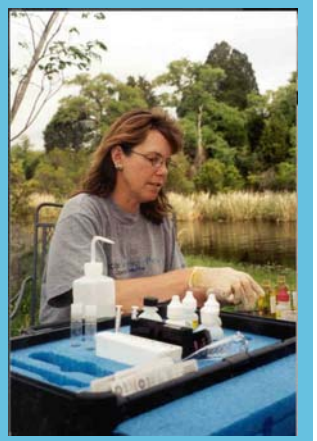
Quality Data

use

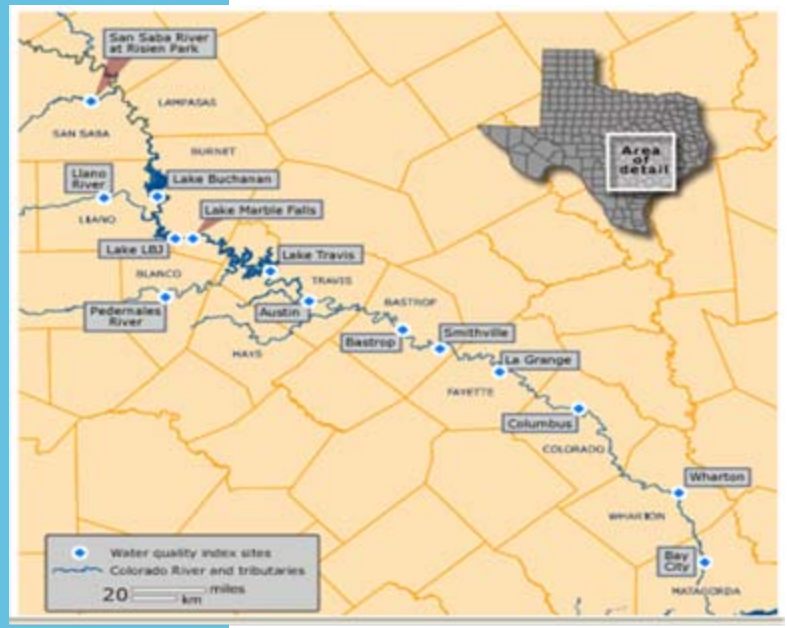
Water Quality Index ?

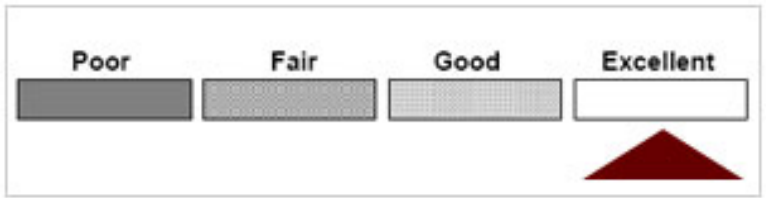
motivates

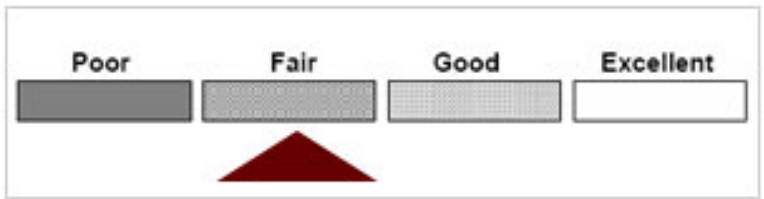
Water Quality Index



- Collected and reported monthly
- Based on 6 water quality parameters
- Best professional judgment
- Every other month relies solely on volunteer data







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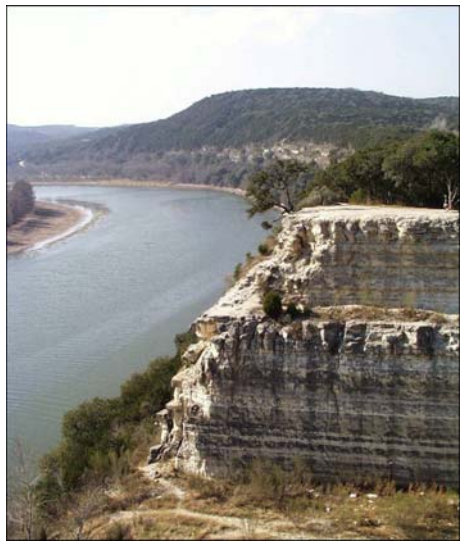
Excellent Rating

- Dissolved oxygen percent saturation 90% or greater
- Temperature and TDS do not exceed stream standard
- Nutrient concentrations:
  - less than 0.1 mg/L in lakes
  - less than 1.0 mg/L in rivers
- Bacteria level below 394 cfu/100mL

Good Rating

- Most (4 of the 6) of the parameters are within optimal ranges
- Bacteria levels must be within acceptable standards

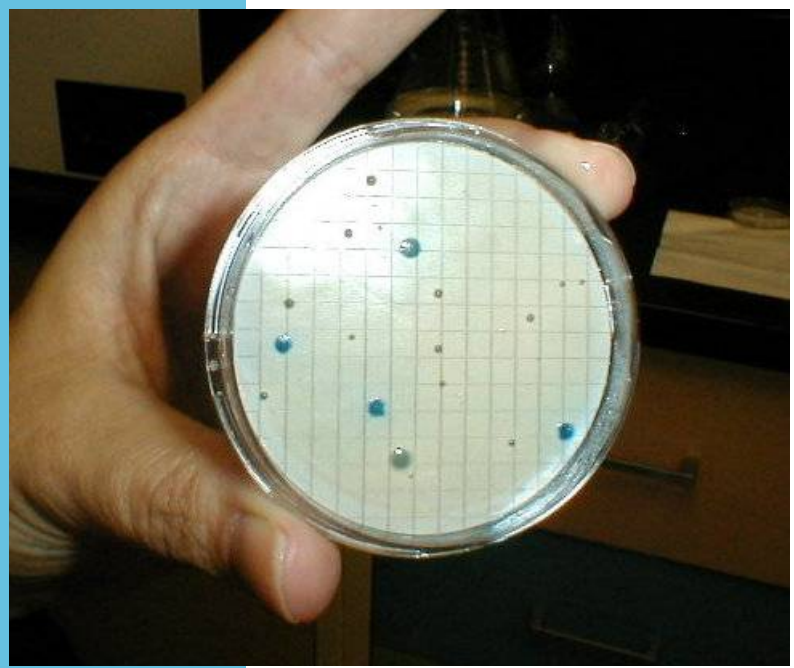


Fair Rating

- Bacteria exceeds standards

  and

- 3 other parameters are outside optimal ranges



Poor Rating

- At least 4 of 6 parameters are outside acceptable limits-elevated bacteria
- Don’t get in the water

Environmental stewardship

Water quality remains excellent in most of basin in January

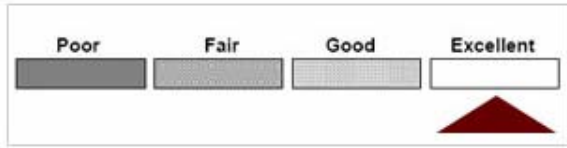
For Immediate Release: Jan. 30, 2006

AUSTIN — Nearly all areas tested in the lower Colorado River, including the Highland Lakes and major tributaries, continued to have high water quality in January.

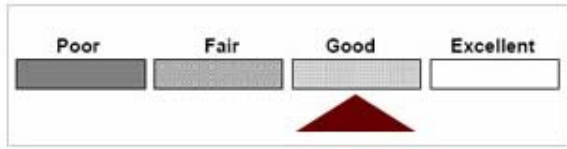
All seven locations tested in the Highland Lakes and tributaries above Austin received a rating of excellent in January, according to LCRA's monthly water quality index. Those locations are the San Saba, Llano and Pedernales rivers, lakes Buchanan, LBJ, Marble Falls and Travis. The Colorado River below Austin also got an excellent rating.

Five other locations below Austin - the Colorado River at Smithville, La Grange, Columbus, Wharton and Bay City -- received a rating of good, while the river at Bastrop received a rating of fair due to elevated levels of nutrients. Because of the lack of rain, the river flow has been

Highland Lakes' water quality excellent in January, varied downstream



Highland Lakes and Austin: All seven locations tested in the Highland Lakes and tributaries above Austin received a rating of excellent in January. The Colorado River below Austin also got an excellent rating.



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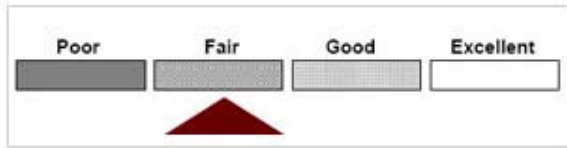
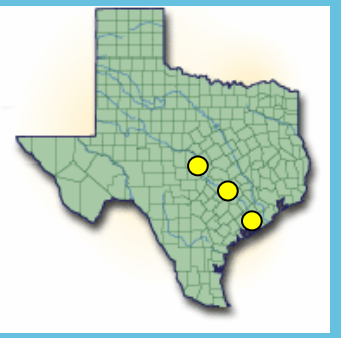


Bastrop: The river at Bastrop received a rating of fair due to elevated levels of nutrients.

Water Quality Index In The News



Marble Falls

Smit

Wharton

47-457-901

Colorado River quality 'good' here in February

Lack of significant rainfall helped keep water quality high in the Highland Lakes region in February, but contributed to only fair water quality in parts of the lower Colorado River below Austin.

Wharton, rated "good," was better than some places, but still was not "excellent."

With the ongoing drought, most tributary streams to the Colorado River in the Hill Country were running at about half their historical average for this time of year. This allowed water quality conditions to remain relatively stable in February.

However, low flows downstream of Austin meant that discharges from the city of Austin wastewater treatment plants were the primary source of water in the river. This contributed to elevated nutrients, which accounted for only fair water quality in several areas. Elevated nutrients can contribute to excessive growth of unwanted plants in the water.

All seven upstream locations tested in February – the San Saba, Llano and Pedernales rivers and lakes Buchanan, LBJ, Marble Falls and Travis – received a rating of excellent, according to LCRA's monthly water quality index.

The Colorado River at Austin also had a rating of excellent. Downstream of Austin, however, was a different story. Four locations – Bastrop, Smithville, La Grange and Columbus – had a rating of fair as a result of elevated nutrients. Water tested at Wharton and Bay City had a rating of good as nutrient levels diminished further downstream.

Water temperatures throughout the basin were typical for the month, with the coolest temperature (52 degrees F) measured on the San Saba River and the warmest temperature (63 degrees F) measure on the Colorado River at Bay City.

Water quality monitoring is part of LCRA's role as a steward of the lower Colorado River. LCRA issues a water quality index monthly to characterize the general quality of the river, tributaries and Highland Lakes using ratings of "excellent," "good," "fair" and "poor." The index is based on a list of parameters, including dissolved oxygen, bacteria, nutrients (nitrogen and phosphorus), temperature and total dissolved solids. The samples are taken at specific locations and may not represent the condition of the entire lake or stream.

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AUSTIN — Nea
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Rating is 'fa

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Smithville's water qua
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Success-Volunteer Perspective

- Volunteer data contributes to the water quality rating
- Odd months index relies solely on volunteer data
- Volunteers are seen as an extension of professionals

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Success-Professional Perspective

- Published in almost every newspaper in the basin
- Data utilized for public information
- Public supports data collection

Overall Success

The general public gains:

- awareness
- knowledge
- respect for the environment

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Questions ?