

Atascosa River TMDL Project: Overview



Total Maximum Daily Load Program
Water Section
Texas Commission on Environmental Quality



Current Status of 303(d) Listing

2002 Water Quality Inventory and 303(d) List

Not supporting the **aquatic life use** due to depressed dissolved oxygen

Not supporting the **contact recreation use** due to elevated bacteria levels

Water Quality Standards



Water Quality Standards

Use	Indicator	Criteria
High Aquatic Life	Dissolved Oxygen	5.0 mg/L Average
		3.0 mg/L Minimum



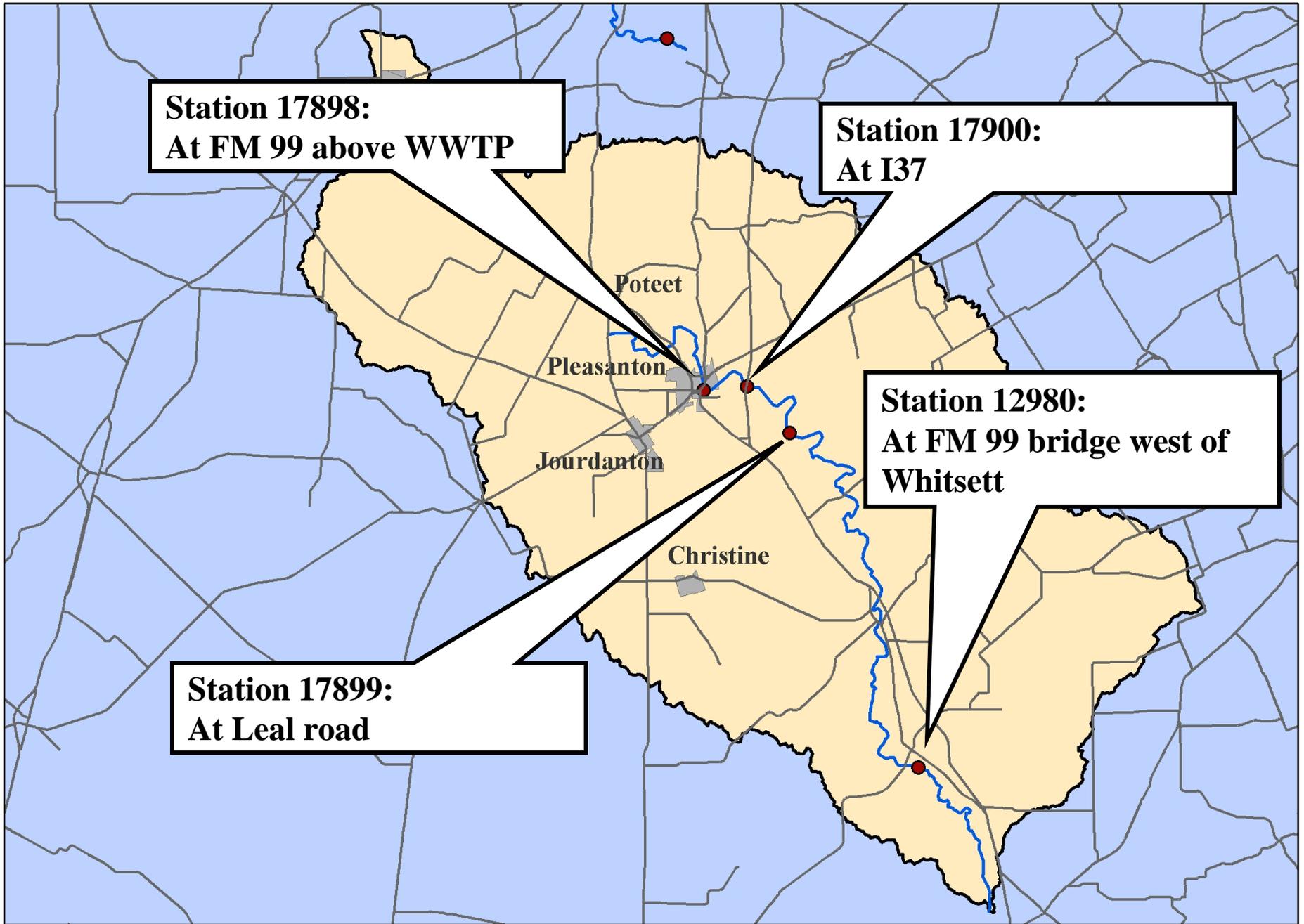
Water Quality Standards

Use	Indicator	Criteria
High Aquatic Life	Dissolved Oxygen	5.0 mg/L Average
		3.0 mg/L Minimum
Contact Recreation	Bacteria (<i>E. coli</i>)	394 col\100 mL Single sample
		126 col\100mL Geometric Mean



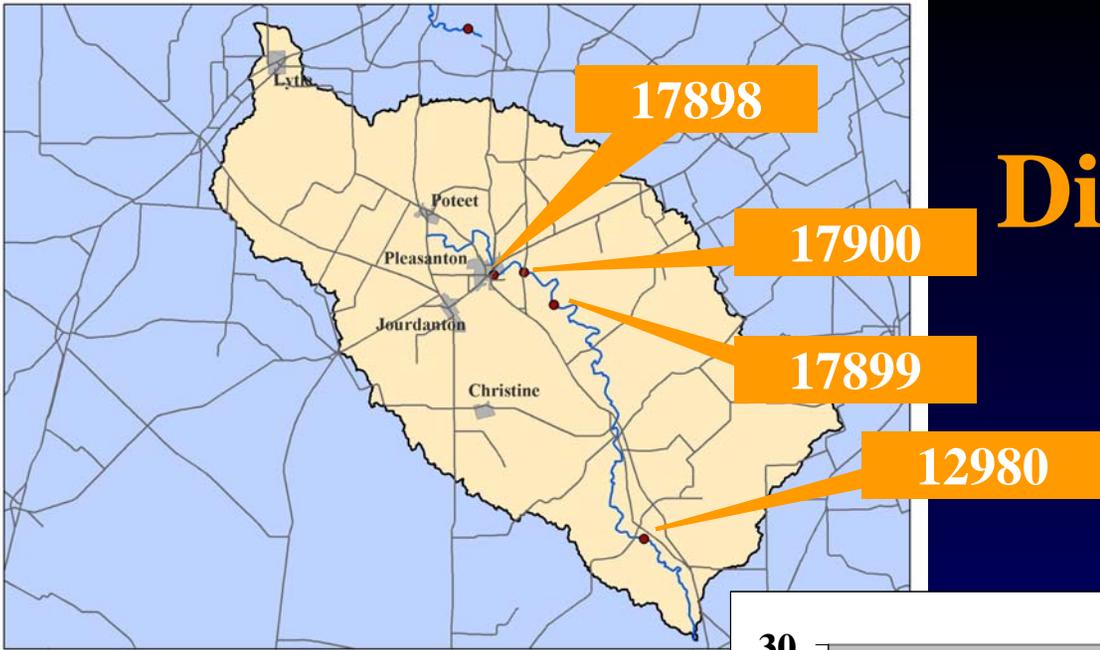
Potential Outcomes

- 1. Conduct TMDL**
- 2. Adjust Water Quality Standard**
(aquatic life use only)
- 3. Remove impairment from 303(d)
List**
- 4. Collect additional data**



Results

Dissolved Oxygen Results



Minimum DO

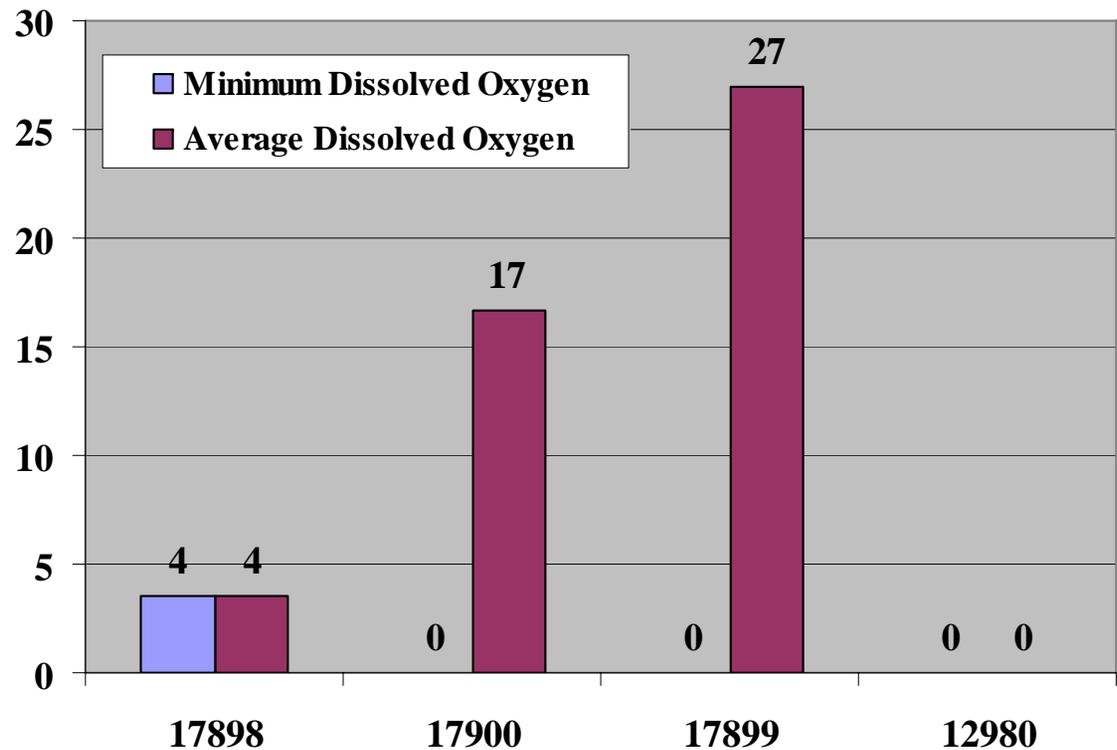
Criteria

3.0 mg/L

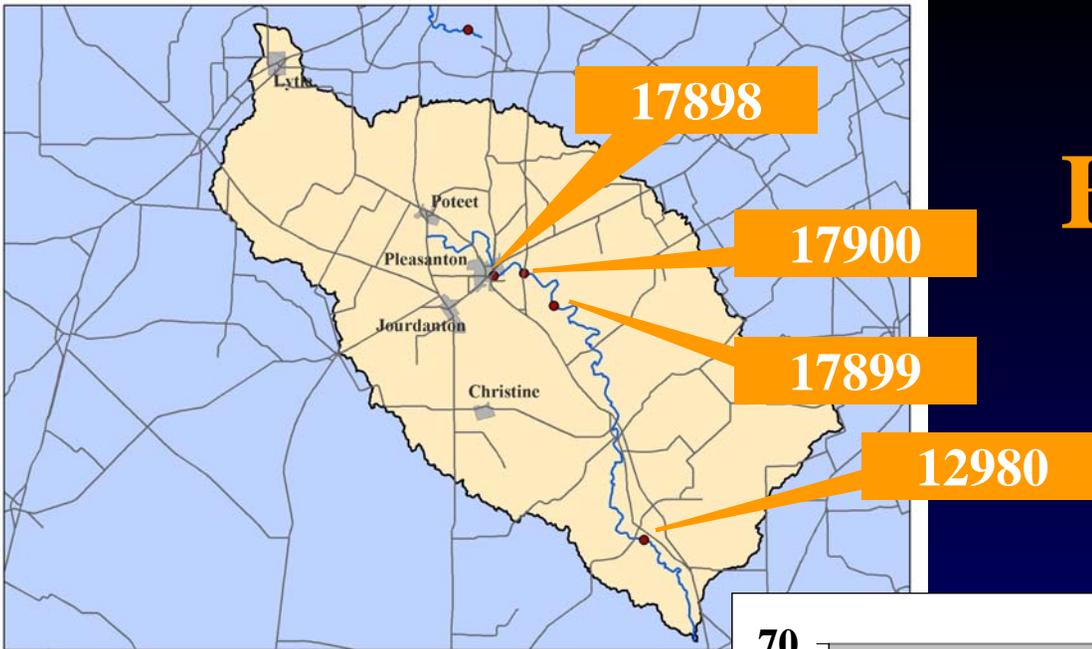
Average DO

Criteria

5.0 mg/L

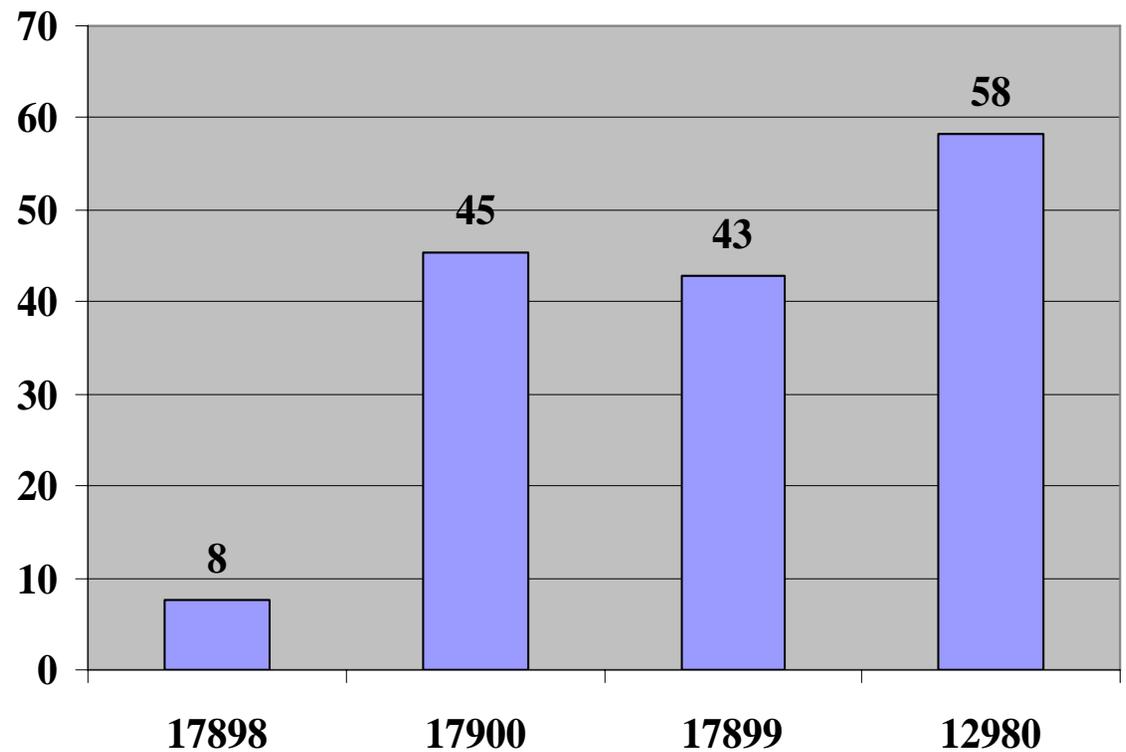


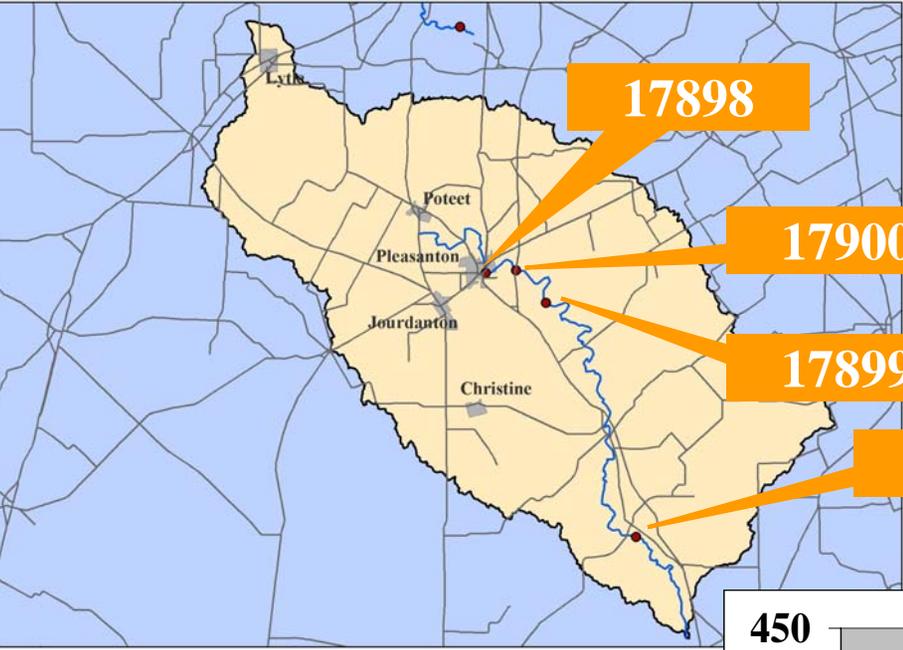
Bacteriological Results



Single Sample Criteria

394 col./100ml

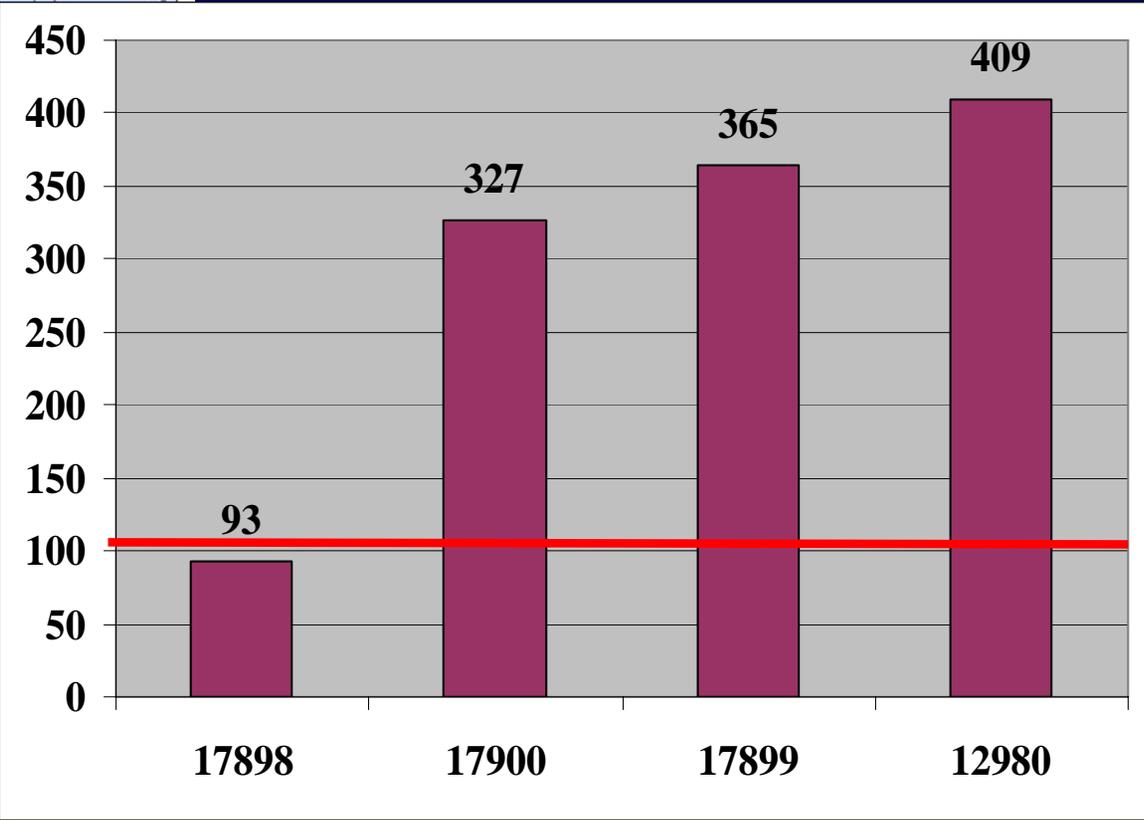




Bacteriological Results

Geometric
Mean
Criteria

126 col.\100ml



Aquatic Life Use Outcome

1. Conduct TMDL

2. Adjust Water Quality Standard
(aquatic life use only)

**3. Remove impairment from 303(d)
List**

4. Collect additional data

Recreational Use Outcome

1. Conduct TMDL

2. Adjust Water Quality Standard
(aquatic life use only)

**3. Remove impairment from 303(d)
List**

4. Collect additional data

Current Status....

Bacteria TMDL Development Underway

Data Collection

Event Data Collection – High flows

Kinetics – Low Flows

Water Quality Modeling

Establish Watershed Committee

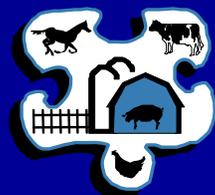
TMDL Process



Key Elements of the Program

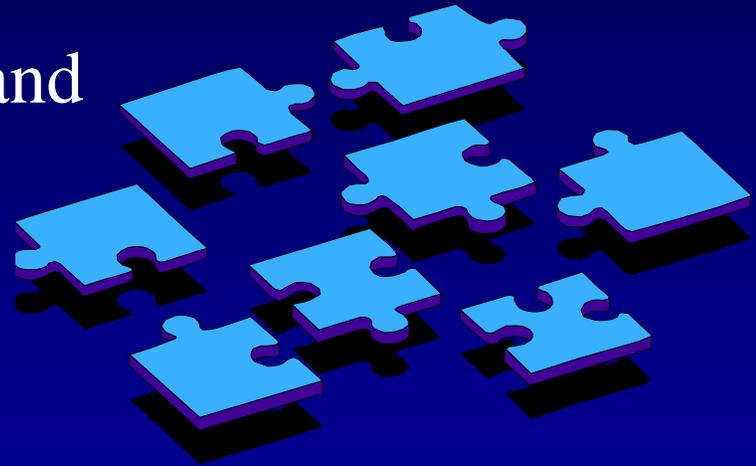
- **TMDL – Total Maximum Daily Load**
Determines the maximum amount (load) of a pollutant that a water body can receive and still maintain uses, and allocates this load to sources in the watershed.

- **Implementation Plan**
A detailed description of the regulatory and voluntary management measures necessary to achieve the pollutant reductions identified in a TMDL.

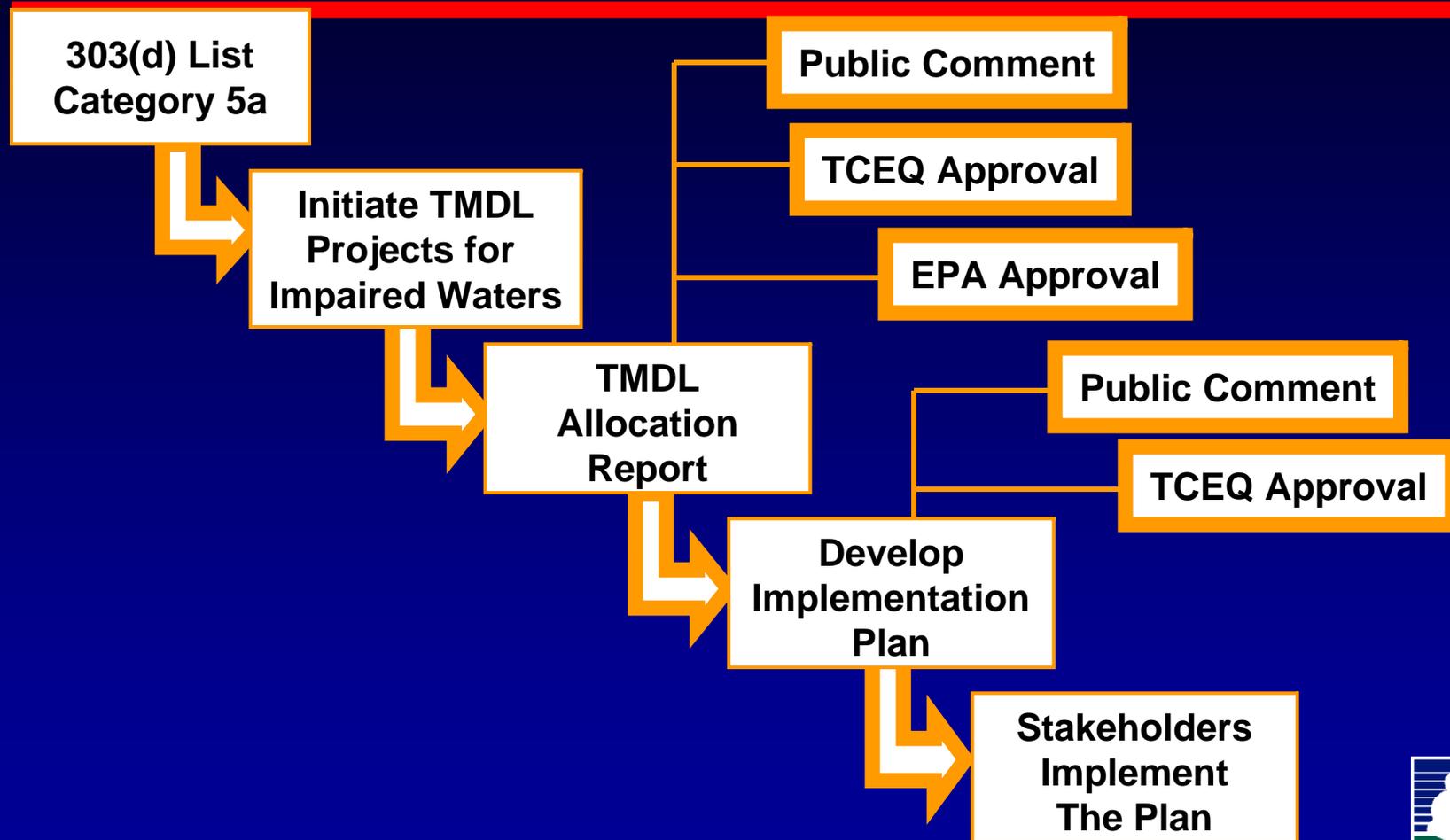


Main Elements of a TMDL

- Problem Definition
- Endpoint Identification
- Source Analysis
- Linkage Between Sources and Receiving Waters
- Margin of Safety
- Pollutant Load Allocation
(both point, nonpoint,
and natural)



TMDL Development Process



Two Kinds of Restoration Plans

- TMDL Implementation Plans (IPs)
- Watershed Restoration Plans (WRPs)
- Both have the same goal — improving water quality in rivers, lakes, or bays.
- IPs are remedial actions for impaired waters; WRPs may be either remedial or preventive.
- IPs are based on total maximum daily loads; WRPs use other measurable goals for water quality.



[www.tceq.state.tx.us/water/
quality/tmdl/](http://www.tceq.state.tx.us/water/quality/tmdl/)



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Texas Surface Water Quality Standards

Uses and numerical criteria

Title 30, Chapter 307 of the Texas Administrative Code

All waterbodies in Texas presumed to have contact recreation except where specifically proven otherwise

Two categories of recreation

Contact – 126 col./100ml

Noncontact – 605 col./100ml



Texas Surface Water Quality Standards

Use Attainability Analysis

Required to change to a use to noncontact

Included as part of rule revisions every three years

EPA has approved few noncontact designations

Currently evaluating UAA procedures to:

Better conduct UAAs

Improve procedures to assess attainment



Texas Surface Water Quality Standards

Use Attainability Analysis (cont)

Factors which support a noncontact use

Water not physically amenable to recreation

No evidence of recreation

Seasonal recreation does not and could not occur
when stream is flowing or in pools under low flow
conditions



