

Lavaca Bay Surface Water Quality Monitoring

Texas Commission on
Environmental Quality
Corpus Christi





COASTLINE

THE COMBINATION OF
ENVIRONMENTAL QUALITY

ALUMINUM

7000 Series

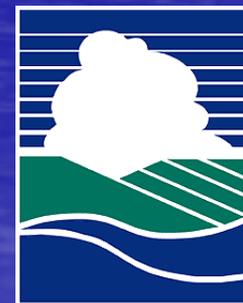


TRESTAGE 180



General Monitoring Guidelines

- Monitoring is divided into the following 4 categories:
 - Routine Monitoring
 - Special Study Monitoring
 - Permit Support Monitoring
 - Systematic Monitoring



Lavaca Bay Monitoring

- TCEQ Corpus Christi Staff currently sample 7 sites in or adjacent to Lavaca Bay
- Sites are sampled for routine monitoring and special study monitoring
- All 7 Sites are monitored on a quarterly basis

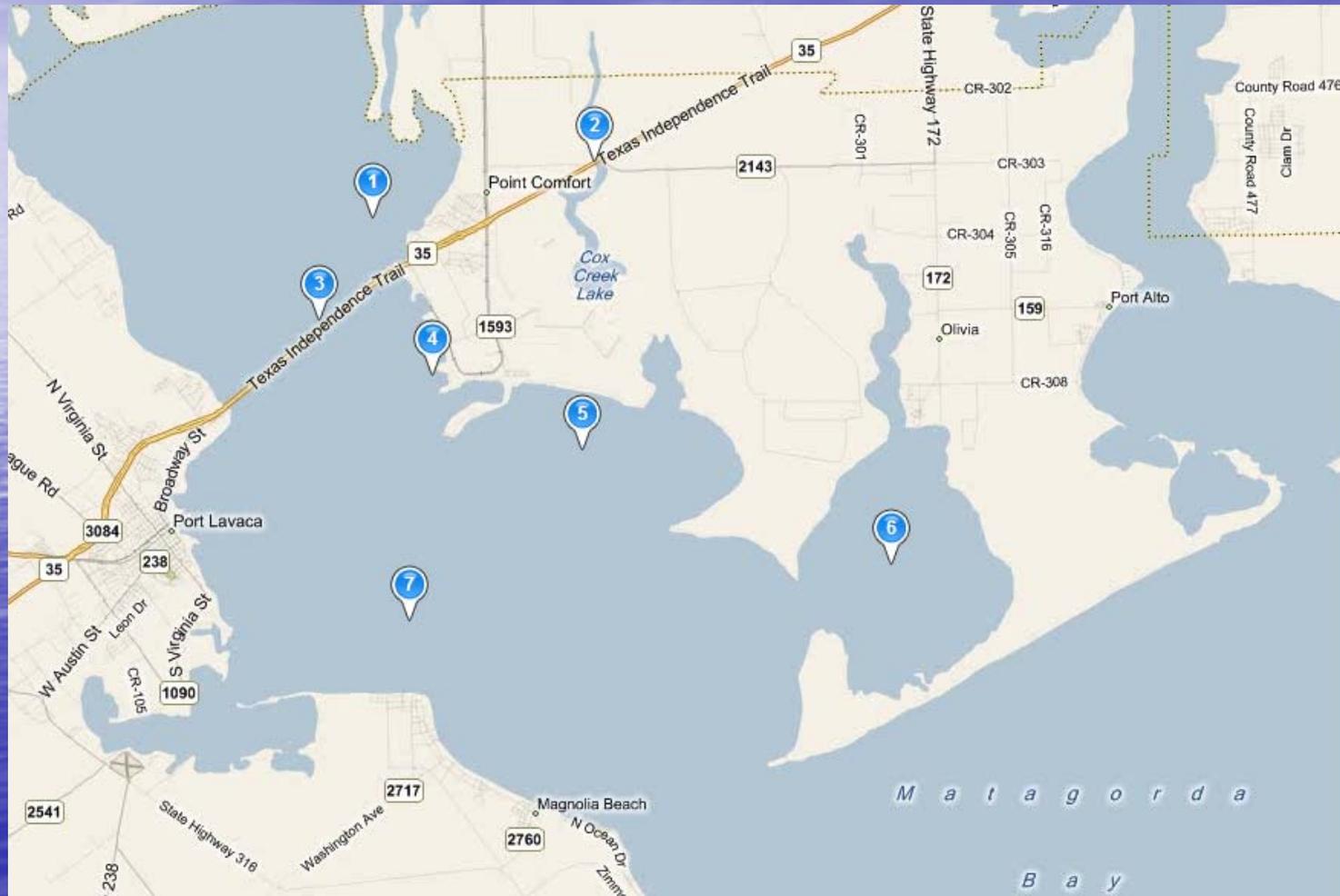


Routine Monitoring Sites

- Lavaca Bay in Red Bluff Channel @ CM 22
- Lavaca Bay @ SH35
- Lavaca Bay "Y" @ CM 66
- Lavaca Bay near Alcoa Docks
- Cox Bay Southeast of Pt. Comfort
- Keller Bay South of Olivia
- Cox Lake @ SH 35



Routine Monitoring Sites



Routine Monitoring Network

- Typically Collects:
 - Physiochemical Data
 - Biological Data
 - Hydrological Data
- Monitoring should continue for at least 5 years



Routine Monitoring Network

- Consists of 4 seasonal monitoring events which includes:
 - Field Measurements
 - DO, pH, Specific Conductance, Temperature, Salinity, and Secchi depth
 - Conventional Chemical Parameters
 - Alkalinity, TSS, Chloride, Sulfate, TDS, Nitrite + Nitrate, Orthophosphate, Total Phosphorous, NH₃, TOC, and Chlorophyll-a



Routine Monitoring Network

- Routine sampling also includes
 - Bacterial Measurements
 - E-coli or Enterococcus
 - May include sampling for toxics in water (metals or organics) and Aquatic Life Monitoring



Routine Monitoring Network

- Does not include:
 - Ambient toxicity (biomonitoring)
 - Toxics in sediment or fish tissue (metals or organics)
 - Unattended 24 hour D.O. measurements
 - Monitoring to characterize the degree or extent of an impairment



Special Study Monitoring

- Special Study monitoring is conducted in addition to the routine monitoring in Lavaca Bay
- Currently 4 of the 7 routine monitoring sites include special study monitoring



Special Study Monitoring

- Sites included in Special Study Monitoring:
 - Lavaca Bay in Red Bluff Channel @ CM 22
 - MW, MS, OS
 - Lavaca Bay @ SH35
 - DO (24 hour)
 - Lavaca Bay near Alcoa Docks
 - MW, MS, OS
 - Cox Bay SE of Pt. Comfort
 - MW, MS, OS



Data Assessment

- Sample Data and field measurements are utilized by the assigned TCEQ Water Body Assessor in Austin.
- Water Body Assessor evaluates data and generates a report which is utilized for the development of the *"State of Texas Water Quality Inventory"*.



How is DATA used ???

- Characterize existing water quality and emerging problems
- Define long term trends
- Determine compliance with water quality standards
- Describe seasonal variation
- And.....



How is DATA used ???

- Produce the State of Texas Water Quality Inventory.
 - Required by Section 305 (b) of the Clean Water Act
 - Enables the public, local governments, state agencies, the Texas Legislature, the US EPA, and Congress to make decisions about water quality management



2010 Draft 303 (d) List

- Currently available on the TCEQ website:
 - www.texaswaterdata.org
- Summary available for all water bodies assessed and includes:
 - Lavaca Bay
 - Cox Bay
 - Keller Bay
 - Cox Lake



Summary of 2010 Draft 303 (d)

- Elevated Chlorophyll-a
- Mercury in edible fish tissue (Ship Channel)
- Bacteria in Oyster Waters (Lavaca/Chocolate Bay)
- Iron in sediment
- **No concern for Toxics in Water**



Additional Information

- Additional Information:
 - Email
 - crp@tceq.state.tx.us
 - Mail
 - SWQM Program, MC224
 - Fax
 - 512-239-4410
 - Web
 - www.texaswaterdata.org



Getting Resources

- SWQM Publications and Resources such as the Procedures Manual (Vol 1 and 2) are available both in Print and Electronically.
 - Order a printed copy
 - 512-239-0028
 - Electronically
 - www.tceq.state.tx.us

