

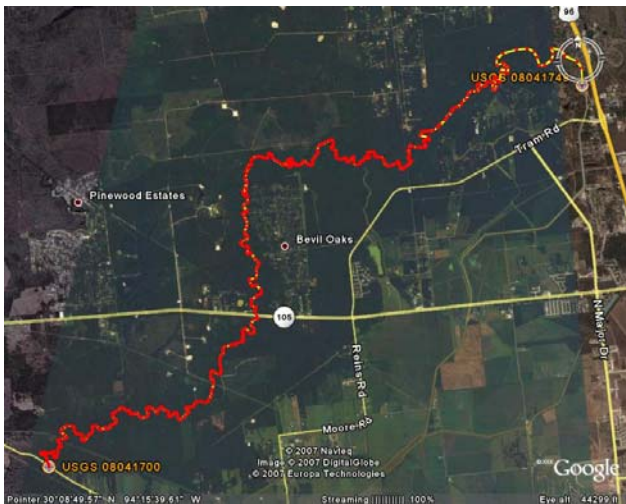
# BASIN HIGHLIGHTS REPORT

## 2007

Lower Neches River Basin/  
Neches-Trinity Coastal Basin



Lower Neches Valley Authority



Prepared in cooperation with the  
Texas Commission on Environmental Quality  
under the authorization of the  
Texas Clean Rivers Act

## 2006 Basin Highlights

Since 1933, the Lower Neches Valley Authority (LNVA) has been developing and protecting the valuable water resources in the Lower Neches River basin. LNVA provides surface water to municipal, agricultural, and industrial customers through an extensive canal system fed by the Neches River and Pine Island Bayou. LNVA joined the Texas Clean Rivers Program (CRP) after it was created by the Texas Legislature in 1991. The goal of the program is to preserve and improve the quality of water resources in river basins throughout the State of Texas.



Figure 1. Village Creek flows over Hwy. 327 near Silsbee, TX on Oct. 21, 2006.

The Lower Neches Valley Authority coordinates the CRP for the assessment area encompassing the Neches-Trinity Coastal Basin (7) and the lower Neches River Basin (6), while the Angelina & Neches River Authority (ANRA) handles the same responsibilities in the upper portion of the basin.

During 2006, LNVA went through a transition period with their environmental staff. David Hancock was hired as the Environmental Supervisor to manage LNVA's Clean Rivers Program and the Environmental Laboratory. He was previously the Environmental Division Manager at ANRA where he served as the CRP Project Manager for the Upper Neches River Basin. He has over 10 years experience working in the Neches River Basin with the Texas Clean Rivers Program.

Lower Neches Basin Highlights in 2006 included:

- ⇒ Major flooding in October 2006
- ⇒ Pine Island Bayou Use Attainability Analysis (UAA)
- ⇒ The Academy of Natural Sciences, Lower Neches River Report
- ⇒ Environmental Laboratory Accreditation
- ⇒ 2006 Water Quality Inventory and 303(d) List

### Major Flooding in October 2006

Record flooding occurred in the lower Neches Basin during October 2006. Nine counties in southeast Texas were declared disaster areas and flooding forced many residents from their homes. The Neches River was 8 feet above flood stage in Beaumont, and Village Creek crested at 28.3 feet on Oct. 19 which was near the record high (34.0) set in 1915. The National Guard was called in to assist residents living near Pine Island Bayou, Village Creek and the Neches River.

Monthly rainfall totals in the region reached record levels due to rain events from Oct. 15-31. Several areas received more than 600 percent of their normal rainfall for the month. Table 1 below shows the Oct. 2006 monthly rainfall totals compared to the normal amounts for three cities in the lower Neches River basin.

### Pine Island Bayou UAA

In 2006, it was mother nature who once again postponed the Pine Island Bayou Use Attainability Analysis (UAA). The study was not scheduled in 2006 due to high flows and flooding conditions during the index period (March 15–Oct. 15). The UAA will re-



Figure 2. LNVA, TCEQ and Big Thicket NP staff participated in the Pine Island Bayou UAA study in Sept. 2005. Photo by Greg Bryant

sume in 2007 with 2-3 planned sampling events to be scheduled during ideal flow conditions in the Pine Island Bayou watershed.

LNVA continues to collect 24-hour measurements at five stations in the Pine Island Bayou watershed to support the UAA. Table 2 on the following page shows the 24-hour dissolved oxygen (DO) results from 2006. At all five stations, the DO mean values were below the 24-hour average criteria (5.0 mg/L) at least once during the index period. One station, Pine Island Bayou at SH 105, was below the criteria for both monitoring events. This 24-hour monitoring effort will continue in 2007 at all five stations. Two events will be scheduled during the UAA and two more will be completed during the index period. At least one-half to two-thirds of all 24-hour measurements must be collected during the critical period (July 1– Sept. 30) when minimum stream flows, maximum temperatures and minimum DO concentrations typically occur.

Historically, dissolved oxygen concentrations in Segment 607 have not met the DO criteria established by the TCEQ. The UAA study will try to discern if the observed low DO values in Pine Island Bayou are naturally occurring and if it adversely affects the

(Continued on page 3)

Location	Total Rainfall	Normal Rainfall	Departure from Normal	Percent of Normal
Kountze, TX	32.03	5.09	26.94	629 %
Jasper, TX	22.31	4.02	18.29	555 %
Woodville, TX	20.46	3.02	17.44	677 %

Table 1. October 2006 Rainfall Totals (inches)

## 2006 Basin Highlights

(Continued from page 2)

Station Location	Station ID	2006 Dates	Mean	Max.	Min.
Little Pine Island Bayou at SH 326	15346	May 16-17	5.4	5.8	5.2
		Sept. 12-13	1.3	2.1	0.3
Little Pine Island Bayou at Woodway	20069	May 16-17	6.1	6.4	5.9
		Sept. 12-13	3.5	5.2	2.6
Pine Island Bayou at SH 105/FM 770	15367	May 16-17	4.7	7.2	2.3
		Sept. 13-14	4.5	7.1	2.2
Pine Island Bayou at Old Sour Lake Rd	10607	May 16-17	5.1	5.6	4.7
		Sept. 13-14	4.2	4.8	3.9
Pine Island Bayou at US Hwy 69	10602	May 16-17	2.7	3.8	1.7
		Sept. 12-13	7.6	9.9	5.6

Table 2. Pine Island Bayou & Little Pine Island Bayou 24-hour Dissolved Oxygen (mg/L) results in 2006. Red font indicates values below the 24-hour average criteria (5.0 mg/L) for high aquatic life use perennial streams assigned to both water bodies.

aquatic community. Once the study is complete, the data will be evaluated and the determination made if site-specific stream standards should be developed and submitted to the EPA for approval.

### The Academy of Natural Sciences' Lower Neches River Report

The Patrick Center for Environmental Research of The Academy of Natural Sciences issued their final report on the Lower Neches River. The report details findings from the Academy's latest biological and water quality survey on the Lower Neches River during October 2003. Previous studies by the Academy were conducted in 1953, 1956, 1960, 1973, and 1996.



Figure 3. Biological specimens are collected during The Academy of Natural Sciences' Lower Neches River Study in Oct. 2003.

The 2003 study reveals stable or slightly improved water quality over the past 20 years. The number of fish species recorded equaled the 1996 study and the number at each station was greater in 2003 than in 1973 at all stations. The algal community is more balanced with the presence of more diatoms than blue-green algae, and the numbers of macroinvertebrate species continue to increase. Elevated fecal coliform levels and low dissolved oxygen values near the river's bottom were noted. Both nutrients and metals in water were below established screening levels for the river segment. The overall conditions of the water quality were good and supporting a healthy biological community.

Funding for the sample analyses during the study was provided by the Clean Rivers Program. Other sponsors included the Lower Neches Valley Authority, Jefferson County Waterway & Navigation District, ExxonMobil, and DuPont. The Academy's 2003 Lower Neches River non-technical report is available on-line at: <http://www.ansp.org/research/pcer/projects/neches/index.php>

### Laboratory Accreditation

The LNVA Environmental Laboratory is currently preparing for accreditation from the TCEQ. The state has adopted the National Environmental Laboratory Accreditation Program (NELAP) to accredit all laboratories in Texas. Accreditation is designed to ensure that laboratories are technically competent and able to generate technically valid results. The key elements of the program include a laboratory quality system, proficiency testing, on-site inspections, and regulatory oversight.

During 2006, LNVA entered into an agreement with Shepherd Technical Services to provide laboratory consulting services in preparation for NELAP. The accreditation process includes developing new and revised Standard Operating Procedures, documenting all aspects of the laboratory operation in a QA Manual, and satisfactorily completing two Proficiency Testing (PT) Studies each year. A Laboratory Information Management System (LIMS) was recently implemented to assist with the data management aspects of the laboratory operation. LNVA plans to submit an application for accreditation to the TCEQ in 2007.

### 2006 Texas Water Quality Inventory and 303(d) List

The Draft 2006 Water Quality Inventory and 303(d) List was completed and presented for public comment on March 19, 2007. The period of record for water quality data and information used in the 2006 report is Dec. 1, 1999 to Nov. 30, 2004. After reviewing all public comments, TCEQ may revise the document based on any new information provided. The revised Draft Inventory will be finalized by TCEQ in late June and sent to the EPA for approval. Additional information and the most current assessment documents are currently available on the TCEQ website at:

[http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/06twqi/public\\_comment.html](http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/06twqi/public_comment.html)

In the Lower Neches Basin, there are 20 new listings on the Draft 303(d) List. The new listings are primarily for dissolved aluminum, dissolved lead, and bacteria. A complete list of water quality impairments and concerns in the basin is available in the Water Quality Conditions by Segment section beginning on page 6.

# Water Quality Monitoring Programs

Each year the LNVA, TCEQ, and other basin agencies discuss the water quality monitoring activities in the Lower Neches River Basin (basin 6) and the Neches-Trinity Coastal Basin (basin 7). This annual Coordinated Monitoring Meeting initiates the planning and development of the basin-wide monitoring schedules.

## LNVA Monitoring Program

LNVA's routine monitoring program provides baseline water quality data for the Lower Neches River and Neches-Trinity Coastal Basins. The current FY 2007 monitoring schedule includes 18 routine sites which provide adequate coverage in the basin (see map/table below). The data is collected on a quarterly basis at each station and is used to identify long-term trends and assess the overall water quality conditions in the basin.

Systematic monitoring is a more intensive data collection effort for parameters of concern. Systematic monitoring for FY 2007 includes 24-hour dissolved oxygen (DO) measurements at five stations in Segment 607, Pine Island Bayou. The following systematic stations were monitored in FY 2006 and are scheduled for 24-hour measurements during FY 2007.

- ⇒ Little Pine Island Bayou at SH 326
- ⇒ Little Pine Island Bayou at Woodway Blvd. in Pinewood
- ⇒ Pine Island Bayou at SH 105/FM 770
- ⇒ Pine Island Bayou at Old Sour Lake Rd.
- ⇒ Pine Island Bayou at US 69/96/287

## Future Monitoring

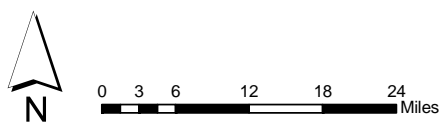
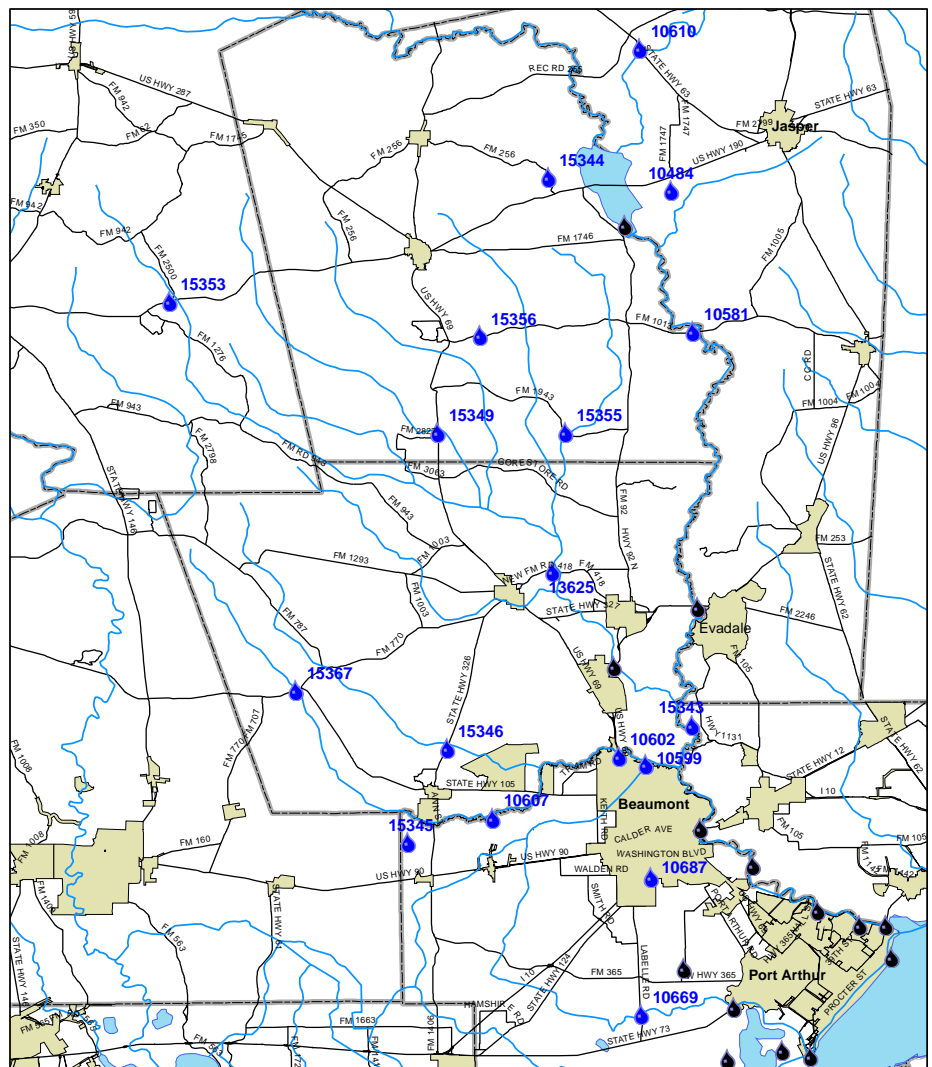
As weather and flow conditions allow, systematic monitoring (24-hour measurements) will continue in FY 2008 to support the Pine Island Bayou UAA. One routine station on Cypress Creek will be added in response to the 2006 Water Quality Inventory assessment results. LNVA will also monitor six routine stations at Sam Rayburn Reservoir during FY 2008.

The National Park Service (NPS) and LNVA are working together to incorporate new long-term monitoring stations located on major tributaries in the Big Thicket National Preserve. NPS will fund these additional CRP monitoring stations to start building a base-

**Legend**

- LNVA Routine Monitoring Stations
- TCEQ Region 10 Monitoring Stations
- Counties
- Roads
- Cities
- Lakes/Reservoirs

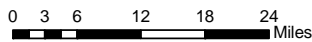
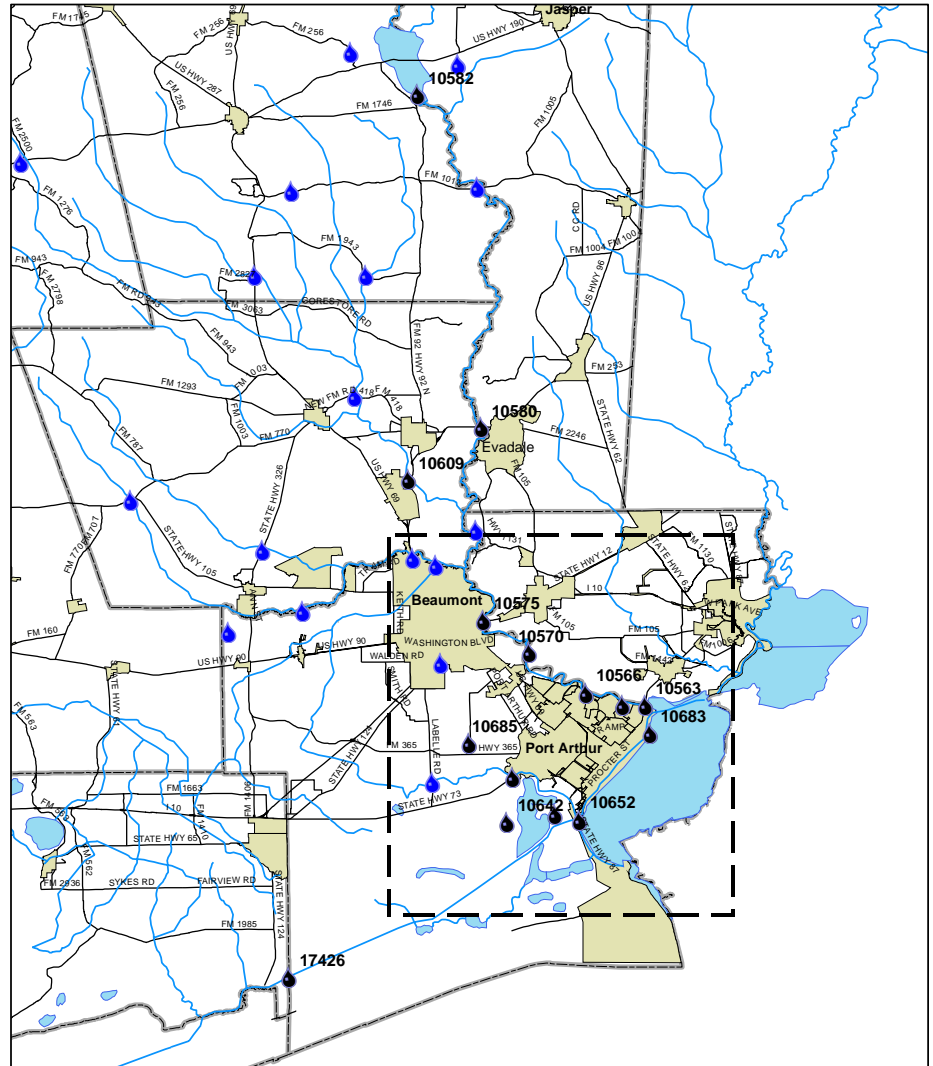
Station ID	LNVA Routine Monitoring Stations
10669	Taylor Bayou at Labelle Rd. (Basin 7)
10687	Hillebrandt Bayou at SH 124 (Basin 7)
15346	Little Pine Island Bayou at SH 326
15343	Neches River near Lakeview
10607	Pine Island Bayou at Old Sour Lake Rd
15367	Pine Island Bayou at FM 770
15345	Willow Creek at Unnamed Rd near Nome
10599	Pine Island Bayou at LNVA 1 <sup>st</sup> Lift Station
10602	Pine Island Bayou at US 69/96/287
10484	Sandy Creek at FM 777
15344	Wolf Creek at FM 256
10610	Angelina River at SH 63
13625	Village Creek at FM 418
15355	Beech Creek at FM 1943
15356	Turkey Creek at FM 1013
15349	Hickory Creek at US 69
15353	Big Sandy Creek at US 190
10581	Neches River at FM 1013



**Legend**

- LNVA Routine Monitoring Stations
- TCEQ Region 10 Monitoring Stations
- Counties
- Roads
- Cities
- Lakes/Reservoirs

Station ID	TCEQ Routine Monitoring Stations
10485	Star Lake Canal 0.4 KM Upstream of the Neches River
10563	Neches River at SH 87 Bridge North of Pt. Arthur
10566	Neches River at Port Neches City Park
10570	Neches River 0.5 mile below Mobil Canal
10575	Neches River bridge at I-10 near Beaumont
10580	Neches River at US 96 East of Silsbee
10582	B.A. Steinhagen Reservoir near dam
10609	Village Creek at US 96 South of Silsbee
10642	Shallow Prong Lake on Big Hill Bayou
10668	Taylor Bayou at SH 73 West of Pt. Arthur
10640	Taylor Bayou approx. 0.25 miles North of Intracoastal Canal
10652	Taylor Bayou turning basin at Texaco dock
17426	Intracoastal Waterway at the Jefferson/Chambers Co. Line East of SH 124
10683	Sabine/Neches Canal adjacent to Topco docks
10685	Hillebrandt Bayou at Hillebrandt Rd. near Lovell Lake



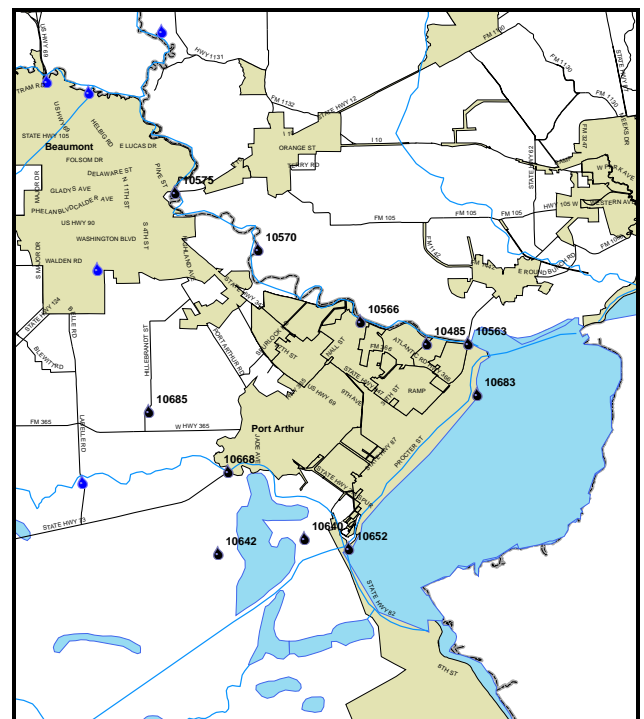
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line database of the ambient, surface water quality conditions in the Preserve. The NPS is utilizing LNVA's Clean Rivers Program to collect valuable, quality assured data for their own water quality management plans. This additional data will be included in future water quality assessments conducted by LNVA and TCEQ.

### TCEQ Regional Monitoring Program

The TCEQ Region 10 Office located in Beaumont conducts surface water quality monitoring in the Lower Neches River and Neches-Trinity Coastal Basins. Their monitoring program consists of routine baseline monitoring, diurnal (24-hour) DO measurements, and special studies to address specific water quality issues.

During FY 2007, the Region 10 staff is monitoring 15 routine stations in the basin which are included on the maps and table above. They are also conducting special studies at five stations and collecting 24-hour measurements at one station. The special studies consist of metals in sediment sampling at stations 10485, 10563, 10566,



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10570, 10575 and organics in water and sediment at station 10563. The metals in sediment are sampled quarterly and the organics biannually. The diurnal (24-hour) monitoring is a special study carry over from FY 06 and consists of one event at station 10485. All routine monitoring is quarterly and includes field measurements, conventional parameters, and bacteria.

For more information on the current (FY 2007) monitoring schedule, please visit the Clean Rivers Program statewide coordinated monitoring schedule at <http://cms.lcra.org/>.

## LNVA Routine Monitoring Parameters

### Conventional Parameters

Alkalinity – measures the buffering capacity of water which helps a solution resist changes in pH caused by the addition of an acid or base thereby maintaining an appropriate pH range for aquatic habitat

Hardness – measures divalent ions, salts such as calcium and magnesium, in association with carbonates

Nitrogen (Ammonia, Nitrate, Nitrite) – measures the nutrient levels in the water related to the decomposition of organic material

Sulfate – measures the amount of water soluble sulfur present in the water

Chloride – measures the ionized, water soluble form of chlorine

present in the water

Total Dissolved Solids – measures the amount of minerals, salts, metals, cations or anions dissolved in the water

Total Phosphorus – measures all chemical forms of phosphorus

Total Suspended Solids – measures the amount of all particles suspended in water that will not pass through a filter

Turbidity – measures the clarity or cloudiness of the water

### Field Parameters

Water Temperature – affects the metabolic rates of aquatic organisms and plants

pH – measures the acidity of the water which affects the solubility, and therefore the toxicity of chemicals and metals

Conductivity – is the measure of electrical current carrying capacity of water and is used to measure the amount of dissolved solids and salts in the water

Dissolved Oxygen (DO) – the amount of oxygen available to aquatic organisms and is the single most important indicator of a water body's ability to support desirable aquatic life

Secchi Depth – measures the clarity or transparency of water

### Additional Parameters

Bacteria – Measures the amount of pathogens (E. coli in fresh water, Enterococci in marine water) present in the water

## Water Quality Conditions by Segment

The Texas Water Quality Inventory and 303(d) List is a comprehensive assessment report of the surface water quality data in Texas. This Assessment Report is published every two years and is based on the last five years of available water quality data. Data is screened in accordance with the latest *Guidance for Assessing Texas Surface and Finished Drinking Water Quality Data*.

Water bodies on the 303(d) List are not meeting current water quality standards and therefore do not support their designated uses. Water bodies may also have concerns for use attainment and established screening levels which are reported in the Texas Water Quality Inventory or 305(b) Report. A detailed list of the impairments and concerns from the Draft 2006 Texas Water Quality Inventory and 303(d) List is provided on pages 5-8 for all segments in the Lower Neches River and Neches-Trinity Coastal Basins.

*Note: Italicized text indicates changes in the assessment results from the revised report issued by TCEQ on June 27, 2007.*

### Segment 0601: Neches River Tidal

The Neches River Tidal segment is from the confluence with Sabine Lake in Orange County to a point 11.3 km (7.0 miles) upstream of Interstate 10. The segment is highly industrialized and consists primarily of a 40 ft. deep navigation channel from the mouth of the river to the Port of Beaumont. Star Lake Canal (0601A) is an unclassified water body in the watershed. Based on the Draft 2006 Assessment Report, there is a concern for chronic toxic substances in water (Malathion) in the lower portion of the segment. TCEQ region 10 continues to monitor organics in water at Station 10563–Neches River at SH 87 to address the concern. LNVA does not currently monitor in this segment.

Draft 2006 Assessment results:

- ⇒ Fully supports aquatic life use
- ⇒ Fully supports general use criteria
- ⇒ Fully supports contact recreation use
- ⇒ Fully supports public water supply use
- ⇒ No concerns for nutrients
- ⇒ Concern for Malathion (lower portion)

### Segment 0602: Lower Neches River

Segment 0602 includes the Neches River from a point 7.0 miles upstream of Interstate 10 in Orange/Jefferson County to Town Bluff Dam in Jasper/Tyler County. Based on the Draft 2006 Assessment Report there is a concern for mercury in fish tissue in Segment 0602 and an impairment for depressed dissolved oxygen in Booger Branch (Segment 0602A).

Draft 2006 Assessment results:

- ⇒ Fully supports aquatic life use
- ⇒ Fully supports general use criteria
- ⇒ Fully supports contact recreation use
- ⇒ Fully supports public water supply use
- ⇒ No concerns for nutrients
- ⇒ Concern for mercury in fish tissue (Neches River)
- ⇒ Not supporting aquatic life use in Booger Branch (0602A) due to depressed dissolved oxygen

## Water Quality Conditions (Lower Neches River Basin)

### Segment 0603: B.A. Steinhagen Lake

B.A. Steinhagen Lake constitutes the segment up to the normal pool elevation of 83 feet. Major tributaries to the segment include both the Angelina and Neches Rivers. LNVA monitors Sandy Creek and Wolf Creek in Segment 0603 for the Clean Rivers Program. TCEQ monitors one site near the dam on the main pool. The Texas Department of Health issued a fish consumption advisory in 1995 after elevated levels of mercury were found in largemouth bass, freshwater drum, white bass or hybrid/striped bass. Elevated levels of *E. coli* bacteria in Sandy Creek and Wolf Creek are likely due to non-point sources. LNVA will continue monitoring *E. coli* bacteria in the segment.

Draft 2006 Assessment results:

- ⇒ Fully supports the aquatic life use
- ⇒ Concerns for mercury in fish tissue
- ⇒ No concerns for nutrients
- ⇒ Not supporting contact recreation use in Sandy Creek (0603A) and Wolf Creek (0603B)
- ⇒ *Dissolved lead in water, Sandy Creek (0603A), data removed for segment*

### Segment 0607: Pine Island Bayou

The Pine Island Bayou segment is from the confluence of the Neches River in Hardin/Jefferson County to FM 787 in Hardin County. The segment is a low gradient, sluggish stream with discharge subject to seasonal variance in rainfall. This segment includes Pine Island Bayou, Little Pine Island Bayou, and Willow Creek. Low dissolved oxygen (DO) values persist throughout the segment. TCEQ initiated the Use Attainability Analysis (UAA) in 2005 to determine if the current high aquatic life use standard is appropriate. Waterbodies are not supporting the aquatic life use for depressed DO, dissolved aluminum in water and dissolved lead in water throughout the segment. LNVA will continue collecting 24-hour DO measurements to support the UAA and monitoring dissolved metals in water at all LNVA routine stations.

Draft 2006 Assessment results:

- ⇒ Not supporting the aquatic life use due to depressed dissolved oxygen in Pine Island Bayou, Boggy Creek (0607A), Little Pine Island Bayou (0607B), and Willow Creek (0607C)
- ⇒ *Not supporting the aquatic life use due to metals in water (Al & Pb) for Pine Island Bayou, Little Pine Island Bayou, and Willow Creek (Al only), data removed for all segments*
- ⇒ Not supporting contact recreation use (*E. coli*) in Little Pine Island Bayou (0607B)
- ⇒ General use criteria is fully supported
- ⇒ No concerns for nutrients in this segment

### Segment 0608: Village Creek

The Village Creek segment is from the confluence with the Neches River in Hardin Co. to Lake Kimble Dam. The watershed is approximately 1,113 square miles and includes Beech Creek, Big Sandy Creek, Cypress Creek, Hickory Creek, Mill Creek, Turkey Creek, and Lake Kimble. LNVA currently monitors five stations in the segment. Impairments and concerns include low pH, metals in water (aluminum, lead), bacteria (*E. coli*), depressed DO, and mercury in fish tissue. LNVA will continue monitoring in the segment.

Draft 2006 Assessment results:

- ⇒ General use is not supported for low pH in Village Creek and is a concern for Beech Creek (0608A) and Cypress Creek (0608C)
- ⇒ Aquatic life use is not supported for depressed DO in Cypress Creek (0608C) and Mill Creek (0608E)
- ⇒ *Not supporting the aquatic life use for dissolved metals in water at Village Creek (Al, Pb), Beech Creek (Pb), Cypress Creek (Al, Pb), Hickory Creek (Pb), Turkey Creek (Pb), data removed for all segments (Cypress Creek still listed for aluminum in water)*
- ⇒ Contact recreation use is not supported for bacteria (*E. coli*) at Beech Creek, Big Sandy Creek, Cypress Creek, and Turkey Creek
- ⇒ Fish consumption use is not supported at Lake Kimble (0608G) and is a concern at Village Creek due to mercury in fish tissue
- ⇒ No concerns for nutrients in this segment

### Segment 0609: Angelina River below Sam Rayburn Reservoir

The Angelina River below Sam Rayburn Reservoir begins at the Sam Rayburn Dam in Jasper County and continues to a point immediately upstream of the confluence of Indian Creek in Jasper County. The water quality in this segment is very good and all uses are fully supported. LNVA continues to monitor one station in the segment. Historical assessments have indicated a possible concern for low dissolved oxygen. However, the 2006 Assessment shows the segment is fully supporting the aquatic life use for all parameters, including DO.

Draft 2006 Assessment results:

- ⇒ Fully supports the aquatic life use
- ⇒ Fully supports the contact recreation use
- ⇒ Fully supports the fish consumption use
- ⇒ Fully supports the general use criteria
- ⇒ Fully supports public water supply use
- ⇒ No concerns for nutrients in this segment

## Water Quality Conditions (Neches-Trinity Coastal Basin)

### Segment 0701: Taylor Bayou

Taylor Bayou is located in the Neches-Trinity Coastal Basin (basin 7) and flows from the LNVA canal in Jefferson County to the salt-water lock 4.8 miles downstream of SH 73 in Jefferson County. The waterbody is relatively deep (8-13 ft.) with a low gradient and sluggish flow. The segment is not supporting the aquatic life use for depressed dissolved oxygen, aluminum in water, and lead in water. There is a water quality concern for chlorophyll-a in Taylor Bayou and arsenic in water at Shallow Prong Lake (701D). LNVA will continue routine monitoring in the segment, and 24-hour DO measurements will be considered in future monitoring schedules.

Draft 2006 Assessment results:

- ⇒ Not supporting the aquatic life use due to depressed DO in Taylor Bayou above tidal and Shallow Prong Lake (0701D)
- ⇒ *Not supporting aquatic life use for dissolved aluminum and lead in water in Taylor Bayou above tidal, data removed for segment*
- ⇒ Fully supports the contact recreation use
- ⇒ Fully supports the general use criteria
- ⇒ Concern for Chlorophyll-a in Taylor Bayou above tidal
- ⇒ *Concern for Arsenic in water at Shallow Prong Lake, changed to arsenic in fish tissue*

### Segment 0702: Intracoastal Waterway Tidal

The Intracoastal Waterway Tidal segment is from the confluence with Galveston Bay at Port Bolivar in Galveston Co. to the confluence with the Sabine-Neches Canal in Jefferson Co. The segment includes Taylor Bayou Tidal from the confluence with the Intracoastal Waterway up to the saltwater lock 4.8 miles downstream of SH 73 in Jefferson Co.

Based in the draft 2006 assessment report, the segment is not supporting the contact recreation use due to elevated levels of Enterococcus bacteria. All other uses are fully supported. Alligator Bayou (0702A) is not supporting the aquatic life use for acute toxicity in water, impaired fish community, and sediment toxicity. In addition, there are concerns for toxic substances in sediment including chrysene, lead, phenanthrene, and pyrene, and a nutrients concern for Chlorophyll-a. TCEQ Region 10 continues routine monitoring at three stations in the segment.

Draft 2006 Assessment results:

- ⇒ Fully supports the aquatic life use
- ⇒ Not supporting the contact recreation use (Enterococcus)
- ⇒ Fully supports the fish consumption use
- ⇒ Fully supports the general use criteria
- ⇒ No concerns for nutrients
- ⇒ Not supporting aquatic life use in Alligator Bayou (0702A)
- ⇒ Concern for Chlorophyll-a in Alligator Bayou

### Segment 0703: Sabine-Neches Canal Tidal

The Sabine-Neches Canal Tidal segment is from the confluence with Sabine Pass at the southern tip of Pleasure Island in Jefferson Co. to the Sabine Lake seawall at the northern tip of Pleasure Island. The segment is fully supporting all uses and there are no water quality concerns. TCEQ Region 10 continues routine monitoring at one station in the segment.

Draft 2006 Assessment results:

- ⇒ Fully supports the aquatic life use
- ⇒ Fully supports the contact recreation use
- ⇒ Fully supports the general use criteria
- ⇒ Fully supports fish consumption use
- ⇒ No concerns for nutrients

### Segment 0704: Hillebrandt Bayou

Hillebrandt Bayou segment is from the confluence of Taylor Bayou in Jefferson County to a point 100 meters upstream of SH 124 in Jefferson Co. It receives urban runoff from approximately 68% of the City of Beaumont. Tributaries carry additional flows from agricultural areas, with base flows contributed by the City of Beaumont's wastewater treatment plant. The segment is not supporting the aquatic life use for depressed dissolved oxygen in the upper end of the segment (station 10685). There is also a concern for nutrients (ammonia-nitrogen, chlorophyll-a) in the segment. LNVA continues to monitor Hillebrandt Bayou to provide appropriate monitoring coverage and adequate data to better assess the nutrient concerns.

Draft 2006 Assessment results:

- ⇒ Aquatic life use is not supported due to depressed dissolved oxygen
- ⇒ Fully supports the contact recreation use
- ⇒ Fully supports the general use criteria
- ⇒ Concerns for nutrients (Ammonia-Nitrogen, Chlorophyll-a)

### Update on the 2006 Assessment Report

Based on information provided to TCEQ during the public comment period, changes were made to the *Draft 2006 Texas Water Quality Inventory and 303(d) List* issued on June 27, 2007. As a result, the majority of the impairments associated with dissolved metals in water data were removed from the revised list. A complete list of changes, TCEQ's response to public comments, and the revised assessment reports are available at the following link:

<http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/06twqj/twqi06.html>



## Stakeholder Participation and Public Outreach

The Lower Neches Valley Authority's Clean Rivers Program (CRP) stakeholder participation and public outreach program includes several activities and events that ensure the public understands the role they play in protecting water resources. Public involvement is essential to ensuring the Clean Rivers Program meets its goals for water quality.

### CRP Steering Committee

The CRP Steering Committee is integral to LNVA's involvement with the public for the Clean Rivers Outreach Program. LNVA's CRP Steering Committee brings together representatives of the local industrial, municipal, and agricultural communities to discuss water quality issues. This diverse group of stakeholders represents a variety of interests and helps identify the needs and concerns throughout the basins.

The main objectives of the committee are to help with creation of realistic water quality goals, review and develop work plans, share resources, and establish monitoring priorities. Members voice any local or regional concerns they may have, while considering the interests of the basin as a whole. The CRP Steering Committee meets publicly at least once a year and discusses a wide range of topics.

Topics covered at LNVA's 2006 CRP meeting included:

- ⇒ CRP accomplishments, fiscal report and goals for FY 2006-07
- ⇒ Basin monitoring activities, TCEO's continuous water quality monitoring network, water quality impacts of Hurricane Rita
- ⇒ LNVA's public education and outreach activities
- ⇒ Update on Pine Island Bayou UAA, Hillebrandt Bayou workgroup, and environmental laboratory accreditation (NELAC)

Additional information about LNVA's Steering Committee including how to get involved, upcoming meetings and past meeting minutes is available on LNVA's website at <http://lnva.dst.tx.us> or call us at (409) 898-0561.



Figure 4. LNVA's annual CRP Steering Committee Meeting was held at the Neches River Saltwater Barrier on August 17, 2006.

### Outreach Events and Programs

Through the Clean Rivers Program, LNVA provides textbook covers and the Major Rivers curriculum to elementary schools in the basin. Approximately 15,000 book covers are distributed each year and they include information on water quality and environmental stewardship. Major Rivers is delivered to 4th grade classrooms who choose to participate in the program. It is designed to help students learn about Texas' major water resources, how water is treated and delivered to their homes and schools, and how to care for their water resources and use them wisely. For the 2006-07 school year, LNVA delivered Major Rivers' teacher/student packets to 55 classrooms for approximately 1,375 area 4<sup>th</sup> graders.

By continuing to keep the public involved in the Clean Rivers Program, LNVA is ensuring that its program will be successful and achieve its water quality goals. To learn more about LNVA's programs and events, please visit [www.lnva.dst.tx.us](http://www.lnva.dst.tx.us) or call us at (409) 898-0561.

### LNVA Web Page



Figure 5. LNVA's website at [www.lnva.dst.tx.us](http://www.lnva.dst.tx.us)

LNVA is the CRP data clearinghouse for the lower Neches River Basin and Neches-Trinity Coastal Basin and maintains a web page for easy public access. This web site not only includes information about LNVA

and its current projects, but it also is a source of information for the Clean Rivers Program.

As the data clearinghouse for the Clean Rivers assessment area, water quality data is available on the web site. When the LNVA page is accessed, users can query the Clean Rivers Program data through a list of monitoring stations. The user can select the query results as raw data or summary statistics. Clean Rivers Program data are updated three times each year.

In addition to water quality monitoring data, the Clean Rivers section of the website also includes:

- ⇒ Clean Rivers Program Overview
- ⇒ Quality Assurance Project Plan (QAPP)
- ⇒ Coordinated Monitoring Schedule
- ⇒ LNVA Basin Reports
- ⇒ CRP Steering Committee Information
- ⇒ CRP activities and meetings