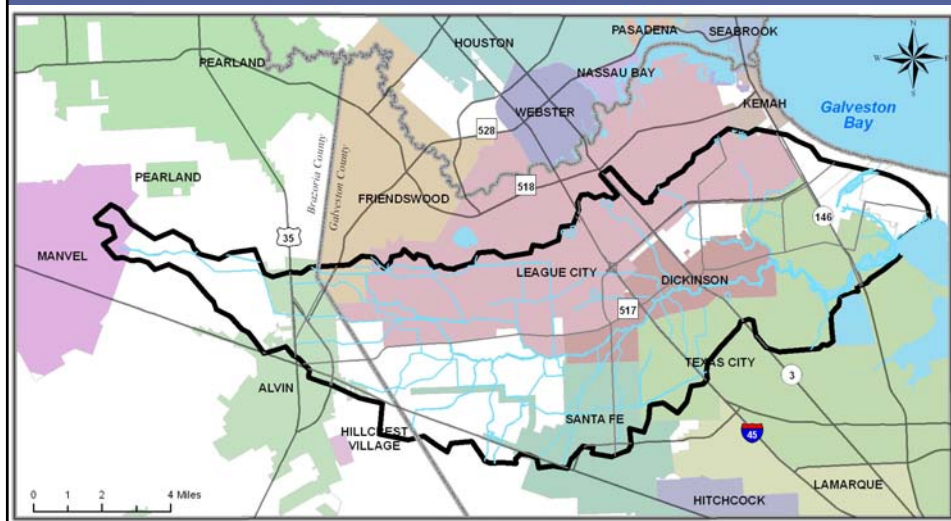


# Dickinson Bayou Watershed: A Plan For The Future



## Dickinson Bayou Watershed



## TMDL Status

- Dissolved Oxygen
  - Was not adopted in 2008
  - Targeting 2011 for adoption
- Bacteria
  - Striving for a 2010 adoption

## Engaging the Community

- Watershed Partnership
- Outreach Materials
- Planning Round Up and BBQ Bash



# Planning Round Up and BBQ Bash

- A different way to engage the community and get feed back
- BBQ, Bluegrass and Beer
- Based on the charrette concept



## Dickinson Bayou Water Quality Low Dissolved Oxygen

It is important to have oxygen in water for fish and other aquatic life to breathe. With out oxygen these animals will suffocate and die.

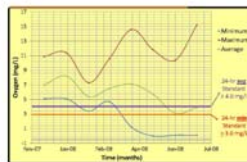
Dickinson Bayou currently has low levels of oxygen.

Water quality data have been collected at multiple stations on Dickinson Bayou since the early 1970's.

Dickinson Bayou is currently not meeting the TCEQ standard for Dissolved Oxygen Levels.

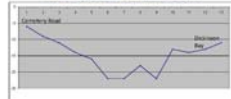
### Probable Causes of Low Oxygen

- Excess **Nutrients** especially nitrogen (from fertilizer, waste water, etc.)
- Runoff from **falling septic** systems
- Leakage from **aging sewage pipes**
- Excess **Organic material**



Data Source: TCEQ Continuous Water Quality Monitor at Post 3 and Dickinson Bayou. (Monitored by the Environmental Institute of Houston)

### Water Depth along Dickinson Bayou



Deep water holes in the bayou make it hard for water to mix vertically in the stream.

Less mixing = Less Oxygen

### The Dickinson Bayou Watershed Needs You!

Here are some ways YOU can protect Dickinson Bayou:

Keep grass clippings, leaf litter and other organic matter from washing into streams and bayous.

Plant wetland vegetation in shallow areas of the bayou to help reduce nutrients and sediment in the water.

Plant a WaterSmart Landscape.



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- Runoff from **failing septic** systems
- Leakage from **ageing sewage pipes**
- Excess **Organic material**

Data Source: TCEQ (at multiple sites) and the University of Texas at Austin (at two sites). Provided by the Hutchinson Institute of Research.

**Water Depth along Dickinson Bayou**

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1. *I am concerned about the water quality in Dickinson Bayou.*
2. *I believe that my everyday behaviors effect the water quality of Dickinson Bayou.*
3. *Waste water treatment plants should be monitored more often.*
4. *Septic system owners should be forced to upgrade to sanitary sewers (waste water treatment plants).*
5. *Public funds should be used to help upgrade septic systems.*





## Watershed Protection Plan

- Examines the current state of the watershed
- Recommends changes to improve the water quality in Dickinson Bayou and the entire watershed



## Plan Recommendations

- Load Reductions

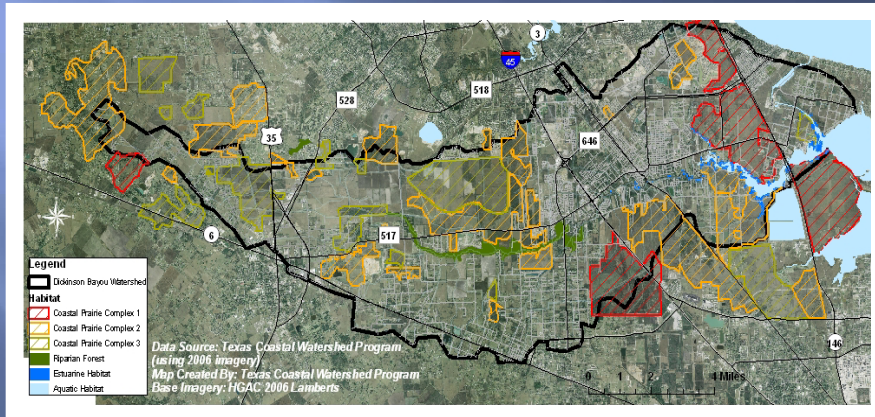
	Short Term (5 years)	Long Term (20+ years)
Total Nitrogen	5%	32%
Total Phosphorus	6%	23%
Bacteria	15%	46%

## Plan Recommendations

- Create a permanent watershed coordinator position
- Preserve habitat
- Install stormwater treatment wetlands
- Implement stormwater best management practices
- Encourage thoughtful development
- Change ordinances
- Reduce the number of septic systems
- Educate

## Plan Recommendations

- Preserve habitat



## Plan Recommendations

- Preserve habitat
- 30% of good quality habitat, 4,200 acres
- \$300 million at current land prices



## Plan Recommendations

- Habitat Preservation Load “Reduction”

	Short Term (1,000 acres)	Long Term (4,200 acres)
Total Nitrogen	4.3%	18.1%
Total Phosphorus	4.6%	19.4%
Bacteria	4.7%	19.7%



## Plan Recommendations

- Implement stormwater best management practices
  - Rain garden, Bioswales, Rainwater Harvesting
- Install stormwater treatment wetlands





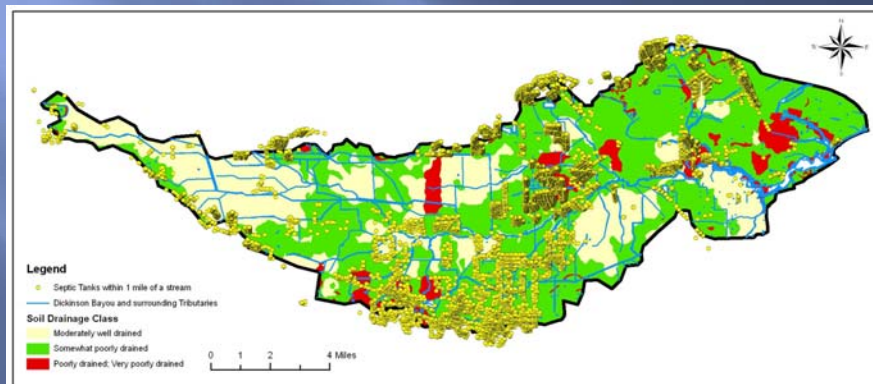
## Plan Recommendations

- Encourage thoughtful development
- Change ordinances
  - To allow easier BMP implementation
  - To allow for more development options



## Plan Recommendations

- Reduce the number of septic systems
- Educate

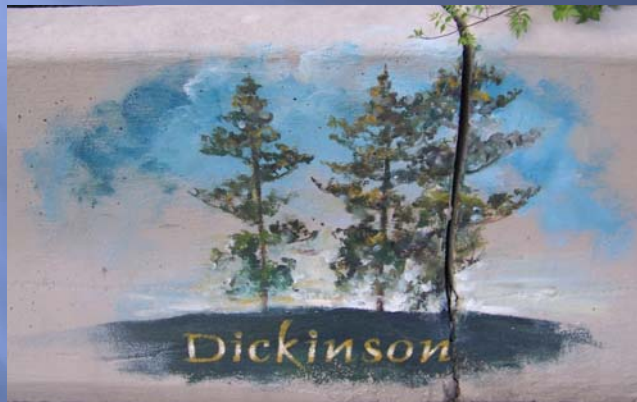


## Where are we?

- 319 Funding
  - Stormwater BMPs
  - Stormwater wetlands
  - Education
- Stormwater ordinances
- Education



[www.dickinsonbayou.org](http://www.dickinsonbayou.org)



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Past Chair: Sarah Snell

Watershed Coordinators:  
Susan Benner &  
Bud Solmonsson