The Attoyac Bayou Watershed Protection Plan – Field Sampling Update

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12/09/2010

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Field Sampling Protocol

• Routine water quality monitoring at 10 locations in the Attoyac Bayou Watershed once every 2 weeks
  – Routine field parameters (Stream Temperature, pH, DO, Conductivity, Flow)

• Scheduled for 52 sampling events over 2 years
10 Sampling Sites

- Attoyac Bayou Sites (site #)
  - Highway 21 (#10636)
  - Highway 7 (#15253)
  - FM 138 (#20841)
  - Highway 59 (#16076)
  - Highway 84 (#20842)
- Waffelow Creek at FM 95 (#16083)
- Terrapin Creek at FM 95 (#16084)
- Naconiche Creek at FM 95 (#20843)
- Big Iron Ore Creek at FM 354 (#20844)
- West Creek at FM 1520 (#20845)
Field Sampling Protocols

- Subset of samples (250) are collected for bacterial source tracking analysis
- Quarterly water samples from 4 identified point source dischargers (Martinsville, Garrison, Center, Chireno)
- Collection of fecal samples for bacterial source tracking
Field Sampling Protocols

• Automated storm event sampling at two sites
  – Attoyac Bayou @ SH7
  – Big Iron Ore Creek @ FM 354

• Collection of 10 storm events, analyzing for same parameters

• Automatic collection and reporting of streamflow via web interface
Field Sampling

- Routine grab sampling began on July 26, 2010 and has progressed bi-weekly since
- 11 grab sampling events have taken place
- Point source dischargers have been sampled once
Storm Event Samples

- Equipment was installed on schedule
- Cell providers had to be changed from Verizon to AT&T
Storm Event Samples

- Water Monitoring Solutions has graciously agreed to cover the cost of converting to AT&T.
- Eco Net is in the process of being converted over.
Field Sampling Challenges

• Streamflow has been very low at all sites until recently
• Consistent flow was not measured at Attoyac at 59 and 84 until 11/15/2010
• Water was often stagnant at some sites
Beaver Dams

- Beaver dams have been cleared to reduce stagnation at Waffelow
Attoyac at Hwy 21 pH

Sampling Date

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Preliminary Field Data Results

Attoyac at Hwy 7 pH

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Preliminary Field Data Results

Attoyac at Highway 21 Dissolved Oxygen

Sampling Date

DO (mg/L)

DO

Standard

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Preliminary Field Data Results

Attoyac at Highway 7 Dissolved Oxygen

Sampling Date


DO (mg/L)

4.0  4.5  5.0  5.5  6.0  6.5  7.0  7.5  8.0  8.5  9.0

DO

Standard

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Preliminary Field Data Results

Attoyac at FM 138 Dissolved Oxygen

Sampling Date

DO (mg/L)

DO

Standard

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Preliminary Field Data Results

Naconiche Creek at FM 95 Dissolved Oxygen

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Preliminary Field Data Results

Waffelow Creek at FM 95 Dissolved Oxygen

Sampling Date

DO (mg/L)

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Conclusions

- Grab sampling progresses well
- Storm event sampling should begin this month
- Field measurements are generally consistent with other studies
Future/Continuing Activities

- Continue collecting routine grab, automatic stormwater and wastewater samples
- Field data and water samples provided to ANRA
- All data provided to AgriLife for Load Duration Curves and Bacteria Source Tracking
- Collect known fecal samples
Known Source Fecal Samples

- Fecal material from animals will be collected for use in bacterial source tracking
- SFASU and CES will collect samples
- We need your help in finding animals to collect samples from

Species Needed
- Beaver
- Chickens
- Cows
- Coyotes
- Dogs
- Deer
- Feral hogs
- Horses
- Nutria
- Opossum
- Raccoon
- Squirrel
- Waterfowl

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