On the Water / Watershed Programs:

* Volunteer and Inmate powered programs:
  * Clean-ups, land and water-based
  * Invasive, exotic plant removals
  * Habitat restoration through native plantings
* Patrols, reconnaissance, reviews
* Pointed investigations for water quality
  * E. coli
  * Fish kills
* Advocacy efforts
  * Education, stakeholder, governmental
Trashologist
Clean-ups

* Trash Bash – 21 years! - Queen Lori Traweek
  * Bayou Preservation: sponsor of 1 – 2 sites
* Annual on the water clean-ups:
  * Houston Canoe Club and friends since 11/14/1987
  * Bayou Preservation: 3 to 5 events annually since 2011
* Plastic content by volume:
  * Land based: 1/3
  * Water based: 1/2!!!!!!!
* Trends:
  * Mining out old litter / illegal dumping; more fresh litter
  * Less volume per participant
Buffalo Bayou
Preservation Award Winners!
Repeat winner!
Cypress Creek
Cypress Creek
The cost of convenient coffee
Tree “decorations”
Cypress Creek
Cub Scouts on Cypress Creek
Sims Bayou with Yes Prep and Student Conservation Association
Boy Scout Project
Buffalo Bayou
Greens Bayou
Hunting Bayou - Supplemental Environmental Project
Hunting Bayou “decorations”
Trash Boom - Lower Buffalo Bayou at Sabine Street
Lower Buffalo Bayou
Golf Cart from Buffalo Bayou
Buffalo Bayou
Ocean Conservancy Clean-up
Tires are like rabbits!
Greens Bayou P100 and P142 Work Areas
HCSO Inmate Community Work Program 6/15/15 – 10/5/15
Greens Bayou P100 and P142
HCSO Inmate Community Work Program 6/15/15 – 10/5/15

6/15/15 – 1.25 Cubic Yards
6/23/15 – 1.25 Cubic Yards
7/6/15 – 1.6 Cubic Yards
7/20/15 – 2 Cubic Yards
7/27/15 – 2 Cubic Yards
8/03/15 – 2.5 Cubic Yards
8/10/15 – 2 Cubic Yards
8/17/15 – 4 Cubic Yards
8/24/15 – 2 Cubic Yards
8/31/15 – 4.5 Cubic Yards
9/14/15 – 3 Cubic Yards
10/5/15 -  5 Cubic Yards

Grand Total: 31.1 Cubic Yards
Brays Bayou Work Areas – HCSO Inmate Community Work Program
9/21/15 – Red, 9/28/15 - Blue
HCSO Inmate Community Work Program
Brays Bayou D100 - 9/21/15

Totals:

21 - Bags of litter
1 - Shopping Cart
1 - Mini blinds
1 - Large Truck Tire
1 - Tire
1 - Duck Decoy Set
35 – Channeled Apple Snail Egg Clusters

This equaled about 3 cubic yards
HCSO Inmate Community Work Program
Brays Bayou D100 - 9/28/15

Totals:
3.5 - Shopping Carts
  1 - Box spring
  1 - Water hose
  1 - Street sign
  1 - Water main cover
  1 - Styrofoam cooler
  1 - Fiberglass pole
  1 - Bottom of traffic barrel
11 - Bags worth of litter
100+ - Channeled Apple Snail Egg Clusters

This equaled about 3 cubic yards
Surface Water Quality Standards

* 30 TAC Chapter 307, Rule 307.4 (b) (2) “Surface waters must be essentially free of floating debris…”

* 30 TAC Chapter 307, Rule 307.4(b) (4) “Surface waters must be maintained in an aesthetically attractive condition.”

* The draft 2014 Guidance for Assessing and Reporting Surface Water Quality in Texas (June, 2015) is absent methods to determine compliance with these aesthetic parameters.
Surface Water Quality Standards Assessment Needed

* July 21, 2015 Bayou Preservation Letter seeking assessment of aesthetic standards
* TCEQ response in July 27, 2015 WQS stakeholder meeting “The TCEQ is not currently assessing trash and has not developed a reliable method that would assess trash in a water body. Qualitative assessment is very difficult versus quantitative.”
* October 6, 2015 email from Andrew Sullivan, Team Leader, Surface Water Quality Monitoring Team “As discussed at the Guidance Advisory Workgroup Meeting in July, methods to assess aesthetic conditions, particularly those associated with debris, **are not included** in the proposal for the 2016 Integrated Report.” (emphasis added)
Regulatory Pathway

- Surface Water Quality Standard
- Water Quality Assessment
- Impairment by stream segment
- Corrective Action
  - TMDL (Total Maximum Daily Load)
  - Implementation Plan / Watershed Protection Plan
Among charges to Senate Ag, Water and Rural Affairs Committee released on October 8, 2015 (Chair, Senator Charles Perry – Lubbock): “study and make recommendations on the effects of windblown and waterborne litter. The study should include an analysis of the economic effects of litter, any necessary methods to prevent and remediate litter and an assessment of state and local programs to reduce litter”
Advocacy Pathways:

- Bayou Preservation’s Public Policy Committee
  - Work through local government and stakeholders
  - Coordinate with statewide and EPA efforts
  - Pose plastic issue questions to local candidates
  - Ty Kelly – Committee Chair

- Current coordination with:
  - Texans for Clean Water
  - Environment Texas
  - USEPA Trash Free Waters
Elsewhere in Texas

* Upper Guadalupe River Authority: “two pronged Trash Free initiative focused on public awareness and community involvement.” This is a part of their bacteria TMDL.

* Upper Trinity River (Dallas, Ft. Worth, Denton, Arlington, Mansfield) “collect 10 on Tuesday” Reverselitter.com

* San Antonio: (slotted openings in curb inlet)
Fish Kills
Water Quality Investigations
Water Quality Investigations
Fecal Bacteria (*E. coli*)
Little Cypress Creek Work Areas
Little Cypress Preserve - Invasive, Exotic Plant Removal 2015
Brays Bayou Watershed – Harwin Park Work Areas (Adjacent to D124 Tributary) – Invasive, Exotic Plant Removal 2015

Harwin Park (HPARD) Invasive, exotic Work Areas - 2015

HPARD Truck Being loaded with invasive, exotic plant debris.
Cypress Creek Work Areas – Cypress, TX.
Barker Cypress ROW, Bud Hadfield Park, Telge Park
Invasive, Exotic Plant Removal 2015
Cypress Creek Work Areas - Meyer Park
Invasive, Exotic Plant Removal 2015
Other 2015 Current Invasive, Exotic Removal Projects Include:

- Edith L. Moore Nature Sanctuary (HAS)
- Nassau Bay Peninsula Park
- Terry Hershey Park, North of I-10

Past Projects:

- Briar Bend Park
- Collins Park
- Cullinan Park at Oyster Creek
- Freed Art and Nature Park
- Herman Brown Park
- Hermann Park
- Memorial Park
- Sims Bayou Urban Nature Center
- Spring Creek Park
- TC Jester Park
- Terry Hershey Park
- Thomas Bell Foster Park
- Timbergrove Manor Park
- Woodland Park
- Watonga Park
- Little Thicket Park
- Bane Park
Planting native species in areas cleared of invasive, exotic plants
HCSO Inmate Community Work Program
Channeled Apple Snail Egg Cluster Removals

Brays Bayou D100 - 9/21/15

Brays Bayou D100 – 9/28/15