



The Bayou Preservation Association (BPA) Stream Ranking Project gives a broad look at the quality of Harris County streams, bayous, and other waterways. There are more than 800 miles of natural streams and over 3000 miles of manmade channels and ditches within the watersheds that drain Harris County. Before this project, there have been no maps or map data available to help the general public gain a sense of the status of the various waterways.

The purpose of the Stream Ranking Project was to produce digital map data that

- identify those streams that need attention and further study to protect or even to restore the stream to the fullest possible ecological potential,
- help give priority to the allocation of limited resources for protection and restoration, and
- educate the public about the nature of our region's waterways using the Internet's World Wide Web.

The stream rankings are not fluvial geomorphological classifications, nor are they strict biological or ecological inventories of streams. They represent a first pass at distinguishing the most at-risk stream corridors from stream corridors that, due to the impacts of urbanization, have little natural richness or diversity within their banks.

BPA hopes that the stream ranking map will be just the beginning of a coherent and comprehensive body of knowledge about our waterways. BPA wants to encourage individuals and institutions to individually and collectively apply their resources to study and create a systematic understanding of the living nature along our waterways. This body of knowledge would include studies of chemical and biological water quality, sediment transport and erosion, vegetation and wildlife, stream paleogeography and cultural history, urban watershed hydrology, and urban non-point source pollution control.

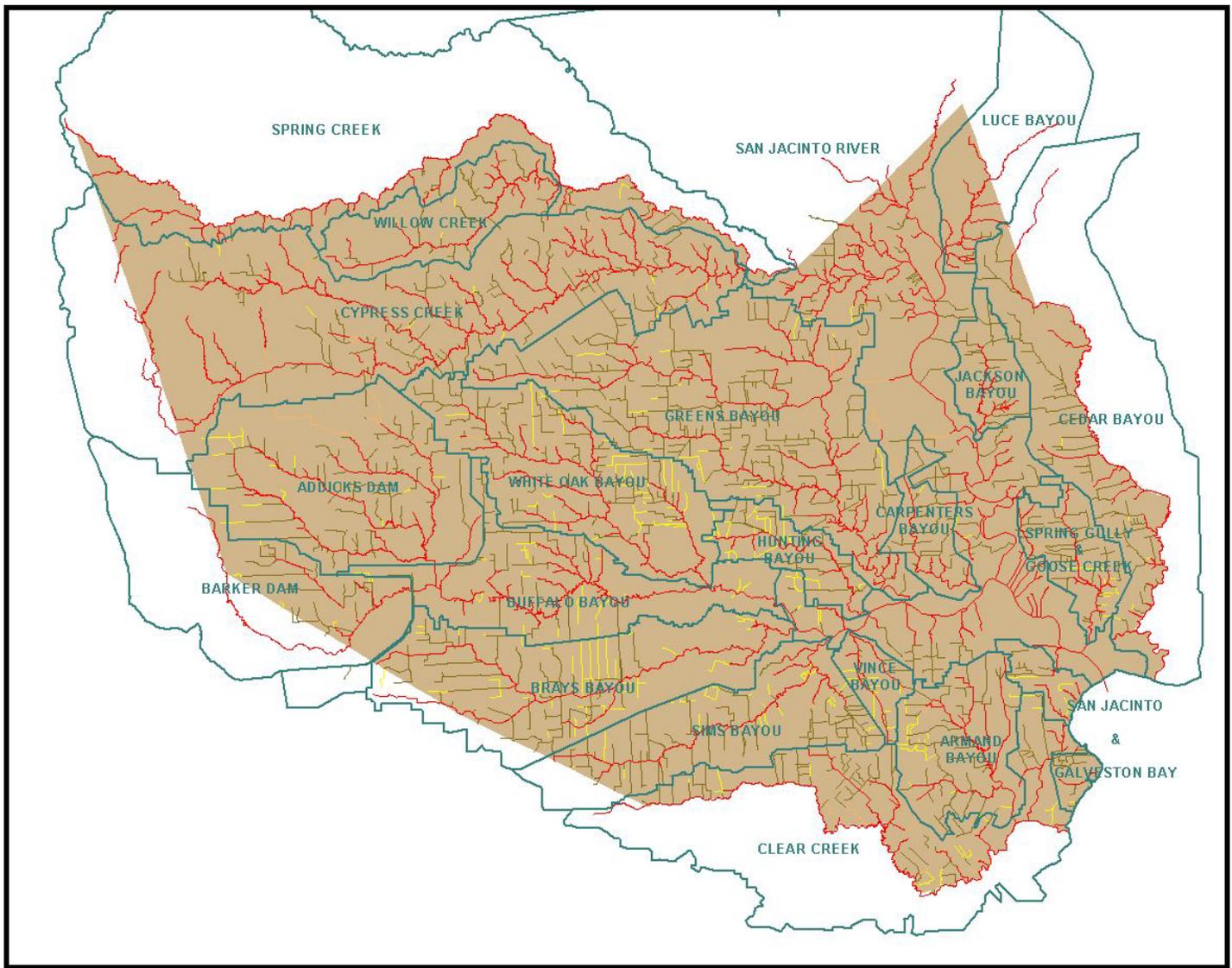
How BPA Ranked the Area's Waterways

BPA engaged the Houston Advanced Research Center's (HARC) Environmental Information Systems Laboratory to assign BPA Stream Ranks to channel segments that comprise the Harris County Flood Control District's (HCFCD) Channel Assessment Program (CAP) database. This database is a geographic information system (GIS) data layer that at this time represents the most complete digital map

representation of the county's waterways. HARC examined each of the 5,563 channel segments in this database against high resolution aerial images (photos) to assign preliminary rankings. The preliminary rankings were then verified in the field for selected, representative stream reaches. The ground verification procedure included a visual biological survey, basic data collection on in-stream, stream bank and channel, and local watershed characteristics, and the collection of digital ground photographs. Final stream ranks were then assigned according to the following system:

1. Streams in their totally natural state, with minimal urban impacts from the watershed along the stream course; high water quality with rich and important ecologies along the stream.
2. Streams still in a natural state, but under pressure from urbanization in increased runoff; at risk for erosion, change in vegetation, and diminished quality.
3. Streams that have been substantially modified (e.g., channelized) but have regained a measure of natural systems ability through re-vegetation; no great hydraulic stress.
4. Streams that have been channelized and partly armored with concrete or other materials or are under great hydraulic stress; high potential for erosion; little vegetation.
5. Streams that have been completely armored with concrete, have been buried in culverts, or otherwise have no value other than as storm sewers.
6. Streams that have been confined to underground structures such as boxes or pipes.
7. Channel segments that are not ranked due to the inability to field-verify preliminary rankings or due to other uncertainties.
8. Channel segments that all or mostly flow through a large water body such as a reservoir or pond.

Project results are summarized on the next page. More detailed information and interactive maps can be viewed on BPA's web page at <http://www.bayoupreservation.org>.



Watershed (Letter Designator)	Stream Miles	BPA Stream Ranks - Miles (%)				
		1	2	3	4-5-6	7-8
Clear Creek (A)	164.80	29.76 (18.06)	9.56 (5.80)	11.71 (7.11)	102.95 (62.47)	10.82 (6.57)
Armand Bayou (B)	95.25	14.26 (14.97)	1.15 (1.21)	6.53 (6.86)	69.76 (73.24)	3.55 (3.73)
Sims Bayou (C)	131.81	-	5.22 (3.96)	3.44 (2.61)	122.73 (93.11)	0.42 (0.32)
Brays Bayou (D)	157.26	-	1.07 (0.68)	4.29 (2.73)	147.39 (93.72)	4.52 (2.87)
White Oak Bayou (E)	181.95	-	4.82 (2.65)	8.64 (4.75)	167.69 (92.16)	0.80 (0.44)
San Jacinto & Galveston Bay (F)	35.57	2.04 (5.74)	0.74 (2.08)	2.94 (8.27)	20.81 (58.50)	9.04 (25.41)
San Jacinto River (G)	280.02	64.58 (23.06)	24.02 (8.58)	41.36 (14.77)	130.96 (46.77)	19.10 (6.82)
Hunting Bayou (H)	67.48	1.84 (2.72)	3.80 (5.63)	3.53 (5.23)	53.89 (79.86)	4.42 (6.55)
Vince Bayou (I)	29.31	-	1.23 (4.20)	1.78 (6.07)	25.73 (87.79)	0.57 (1.94)
Spring Creek (J)	112.74	55.44 (49.18)	15.86 (14.07)	18.21 (16.15)	21.67 (19.22)	1.56 (1.38)
Cypress Creek (K)	235.37	21.20 (9.01)	17.35 (7.37)	36.36 (15.45)	159.75 (67.87)	0.71 (0.30)
Little Cypress Creek (L)	49.81	15.89 (31.91)	5.11 (10.25)	9.40 (18.86)	19.42 (38.98)	-
Willow Creek (M)	58.56	10.93 (18.67)	2.50 (4.27)	15.54 (26.54)	29.33 (50.09)	0.25 (0.43)
Carpenters Bayou (N)	44.47	7.16 (16.09)	0.68 (1.53)	3.56 (8.00)	32.47 (73.02)	0.60 (1.35)
Spring Gully & Goose Creek (O)	71.11	5.88 (8.27)	1.92 (2.69)	3.98 (5.60)	57.36 (80.66)	1.97 (2.78)
Greens Bayou (P)	317.86	15.34 (4.83)	18.86 (5.93)	9.34 (2.94)	274.31 (86.30)	-
Cedar Bayou (Q)	132.12	17.26 (13.06)	27.17 (20.56)	16.85 (12.75)	70.85 (53.62)	-
Jackson Bayou (R)	35.51	2.99 (8.43)	3.26 (9.18)	5.43 (15.30)	23.82 (67.09)	-
Luce Bayou (S)	34.81	13.42 (38.57)	6.25 (17.96)	10.18 (29.26)	4.94 (14.20)	-
Barker Dam (T)	67.02	4.46 (6.65)	0.97 (1.45)	3.96 (5.90)	52.64 (78.54)	5.00 (7.46)
Addicks Dam (U)	146.67	8.71 (5.94)	13.23 (9.02)	17.15 (11.70)	107.13 (73.04)	0.45 (0.31)
Buffalo Bayou (W)	136.40	23.79 (17.44)	21.47 (15.74)	8.81 (6.46)	82.15 (60.23)	0.18 (0.13)
All Watersheds [Total Miles (%)]	2585.90	314.95 (12.18)	186.24 (7.20)	242.99 (9.40)	1777.75 (68.75)	63.96 (2.47)

