



# HARRIS COUNTY FLOOD CONTROL DISTRICT INFRASTRUCTURE DIVISION UPDATE

July—August—September 2004

## News of Note:

- The District's first tree planting for this season is on October 30.
- The HCFCF Tree and Shrub Field Guide is now available online at [www.hcfcf.org/dl\\_fieldguide.html](http://www.hcfcf.org/dl_fieldguide.html). The long awaited Vegetation Management Manual will soon be accessible from the same link.
- Please welcome Kenneth Parker (Property Manager) and Robert O'Sullivan (ME Technician) to the Infrastructure Division.
- Phase II construction of the North Service Center has begun and is expected to be completed in 2005.

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## Introduction

Thank you for your interest in activities of the Infrastructure Division at Harris County Flood Control District. This newsletter, sent to interested parties each quarter, describes the activities of the Infrastructure Division. Please do not hesitate to offer comments or ask questions. You can reach us at 713-316-4815 or by e-mail at [rad@hcfcf.co.harris.tx.us](mailto:rad@hcfcf.co.harris.tx.us).



M121-00-00 Downstream of Holderieth

Native wildflowers are being planted on over forty acres around the county this year. This is the fourth year for the Infrastructure's award winning wildflower planting program.



## Infrastructure Calendar

Oct. 22 & 23	Community Services Manager, Rachel Decker, presented at the National Trails Symposium in Austin.
Oct. 26 & 27	Infrastructure staff attended the Harris County Training Conference
Oct. 30	First volunteer tree planting. Opportunities continue almost weekly though January.
Nov 17 & 18	The District, with assistance from the National Park Service, hosts a symposium to promote multi-use on District property.

## Forestry

The District's tree planting program is starting on October 30, 2004, when volunteers, encouraged to dress in a tree-related costume, will plant trees on E500-04-00, a basin along White Oak Bayou that is home to several existing tree plantings.

A trained Service Center crew continues to assess existing tree planting locations, in addition to regular

tasks of staking, watering, mowing, weeding, and mulching around trees.

There are currently 13,172 trees in the tree grow-out center at the South Service Center. The trees have grown better than expected, and many will be planted this season.

Opportunities to plant trees are listed at [www.volunteermatch.org](http://www.volunteermatch.org). Please visit the site and sign up!

# Asset Management

In addition to responding to Service Requests and related tasks, Facilities Management has worked on the following projects in the past quarter:

Outfield GIS Data Collection: The identification of inventory, such as outfall pipes, control structures, etc., and deficiencies along HCFCD rights-of-way using hand-held GPS units and lasers to record their locations. Each item identified with a GPS location is referred to as a point collected.

- Data has been collected on approximately 65% of the watersheds throughout Harris County. About 57,000 points identifying inventory and deficiencies have been collected to date.
- Points have been collected in the following watersheds: Addicks, Armand, Barker, Brays, Buffalo, Carpenters, Clear Creek, Goose Creek, Greens, San Jacinto River and Galveston Bay Watershed (F Units), San Jacinto, Sims, Vince, and White Oak.
- Data is currently being collected in the Cypress Creek Watershed and is near completion.

## Maintenance Repair Program:

Initiated to establish a plan for scheduling maintenance repairs by identifying and analyzing deficiencies along HCFCD rights-of-way. Many of the deficiencies are identified through the Outfield GIS Data Collection program. Scheduling is based on factors such as available right-of-way, degree of deficiency, location, and need for repair.

- Maintenance repair projects have been scheduled for Fiscal Years 2005 and 2006, and 2007 totaling over \$8 million for each year.
- Projects for FY 2008 are being evaluated.
- As new projects are identified, they are rated and placed into the schedule accordingly. As a result,

some projects already scheduled may be rescheduled for a later date.

- With the use of the data from the Outfield Data Collection Program, 86 projects have been verified and another 260 sites have been identified as potential repair sites for the upcoming years.

## Building Maintenance:

- Renovations have begun on the northeast portion of the 1<sup>st</sup> floor and on some of the interior offices on the 2<sup>nd</sup> floor in the Infrastructure Division area of the building.
- A new rooftop air conditioning unit was installed for alert room use and a spot cooler was purchased for use in conference room 335 during alerts.
- Fiber optic cable was installed for the IS Department.
- An electronic security monitoring system and motorized gate openers were installed at the new North Service Center.
- Phase Monitors were installed at the South Service Center.

## Facilities Management

- The Property Management Department has completed discussions with the City of Houston regarding "orphan" ditches, i.e., channels with no responsible parties identified, the purpose of which is to establish which agency is responsible for addressing maintenance and management issues along the channels within the City of Houston.



Outfield GIS Data Collection on W147-00-00

*Facilities Management has filled the vacant Property Manager positions bringing the total to three. The Property Managers and their assigned watersheds are as follows:*

### James Middleton

A – Clear Creek  
B – Armand Bayou  
C – Sims Bayou  
D – Brays Bayou  
F – San Jacinto and Galveston Bay  
G – Southern half San Jacinto River  
H – Hunting Bayou  
I – Vince Bayou  
W – Buffalo Bayou

### Richard Weber

E – White Oak Bayou  
J – Spring Creek  
K – Cypress Creek  
L – Little Cypress Creek  
M – Willow Creek  
T – Barker Reservoir  
U – Addicks Reservoir

### Kenneth Parker

G – Northern half San Jacinto River  
N – Carpenter's Bayou  
O – Spring Gully and Goose Creek  
P – Greens Bayou  
Q – Cedar Bayou  
R – Jackson Bayou  
S – Luce Bayou

## Selective Clearing

Selective clearing crews have recently completed projects along the following:

Channel	Name	Location
C106-03-00	Tributary of Berry Bayou	Forest Oaks Dr. to downstream end
E116-00-00	Tributary of White Oak Bayou	E116-05-00 to Pinemont
E117-00-00	Cole Creek	Windfern to Fairbanks N. Houston
E122-01-00	Tributary of White Oak Bayou	Fairbanks N. Houston to E122-00-00
K112-01-00	Tributary of Cow Gulch	Treaschwig Rd. to downstream end
K140-00-00	Pillot Gully	Spring Cypress to K140-02-00
K211-00-00	Bypass of Turkey Creek	Hardy Toll Rd. to Thorne Rd.
M101-00-00	Tributary of Willow Creek	M101-01-00 to downstream end
M103-00-00	Tributary of Willow Creek	Inway Ct. to upstream end
M105-00-00	Tributary of Willow Creek	Jadecrest to downstream end
M121-00-00	Tributary of Willow Creek	Upstream end to M100-00-00
M122-00-00	Tributary of Willow Creek	Boudreaux to south of M100-00-00
P114-01-00	Tributary of Greens Bayou	Upstream end to Oates Road
P125-02-00	Tributary of Greens Bayou	Upstream end to P125-00-00
P240-00-00	Bypass of Hoods Bayou	P140-00-00 to Green Rock

Some of the selective clearing projects being considered for execution are:

Channel	Name	Location
A115-00-00	Tributary of Clear Creek	Entire reach
A120-00-00	Beamer Ditch	Dixie Farm Road to A100-00-00
C123-00-00	Tributary of Sims Bayou	South Acres to downstream end
G103-02-01	Tributary of Bear Bayou	Oak Lane to downstream end
G103-25-00	Dunks Ditch	Antelope Dr. to Big Deer Rd.
K112-01-01	Wild Cow Gulch	Upstream end to K112-01-00
N104-00-00	Tributary of Carpenters Bayou	Woodforest to I-10
P133-00-00	Tributary of Greens Bayou	P133-02-01 to downstream end
Q114-07-00	Tributary of Magee Gully	N. Main St. to downstream end
Q126-00-00	Krenek Ditch	Bohemian Hall to Lindstrom
T101-02-00	Tributary of Mason Creek	Katy Freeway to T101-00-00



Type	Active	Exec	Pending
	July—Sept		
Adopt-a-lot	18	1	1
LMA	43	3	7
Encroach	112	4	1
Grazing	4	0	2
H & B	37	3	10
Pub Rec	17	0	2
Mowing	11	0	2

## Multi-Use Program

The Property Management Department actively seeks partners to develop multi-use opportunities for District property that benefit the community. These partnerships also have the potential to reduce District maintenance responsibilities and related costs.

The Community Services Section has been working with the Rivers, Trails and Conservation Assistance (RTCA) program of the National Park Service to market multi-use opportunities on District property. RTCA sent a survey regarding multi-use to several hundred potential multi-use partners. A meeting has been scheduled to discuss the results of the survey, and to elaborate on partnership opportunities.

## Development Coordination and Inspection Section (DCIS)

DCIS tracks, monitors, inspects, and documents construction activity in District rights-of-way. This section also identifies potential impacts to the property by development and ensures that new property accepted into the District inventory meets property management and maintenance guidelines. The DCIS also provides review of developer and public agency projects that are proposed in District right-of-way.

DCIS is currently monitoring 50 sites per week of the 336 active development construction projects which affect HCFCD infrastructure (see table). Commissioners Court accepted two channels and one basin into the District's maintenance system.

The group also meets with the District's Plan Review Section to review plans and discuss designs to identify and alleviate problems that may arise prior to the construction phase.

Channels	41
Basins	54
Outfalls	145
Bridges	16
Utilities	51
Hike & Bikes	2
Adj. Dev.	16
Landscape	1
Multi-Features	8



## Herbicide

Licensed Service Center crews completed backpack application of herbicide to undesirable broadleaf vegetation such as ragweed on Willow and Cypress Creeks.

Crews have been treating Johnson Grass on selected channels. These crews follow about two weeks behind the channel mowers. The Johnson Grass abatement program, a combination of herbicide and mowing, has begun to show positive results on those channels that have been in the program since its inception. Channels in the program are being inspected to see whether a third mowing – and subsequent herbicide treatment - is required to keep Johnson Grass under control. The following watersheds have been incorporated into the program of selective herbicide application:

Unit	Description	Years in Program
E100-00-00	White Oak Bayou watershed	2
P118-00-00	Halls Bayou watershed	2
H100-00-00	Hunting Bayou watershed	1
D100-00-00	Brays Bayou watershed	1
C100-00-00	Sims Bayou watershed	½

## Turf Establishment

Turf Establishment provides protection from erosion by quickly establishing grass on channels that do not have suitable cover. Because establishment frequently is on channels that have recently been repaired or built, one can examine current projects of the Maintenance Engineering Department and the Maintenance Construction Group to determine upcoming establishment projects.

Turf Establishment contractors worked on the following sites in September:

Unit	Name	Location
R102-03-00-X003	Gum Gully	Harbor Mist upstream
B109-03-00-X003	Spring Gully	Carlow Street downstream
P100-00-00-X050	Greens Bayou	Confluence of P155 downstream
F101-03-00	San Jacinto Bay	Confluence of F101 upstream
F103-00-00	San Jacinto Bay	Strong Road downstream
E132-00-00	White Oak Bayou	FM 1960
U102-02-00	Bear Creek	W. Little York downstream
L105-00-00	Little Cypress Crk	Two spots on Louetta
P149-00-00	Hoods Bayou	Greenvale downstream ; W. Greens Rd upstream
D512-01-00	Brays Bayou	Gasmer North & South Basin
T101-00-00	Mason Creek	Franz Road upstream
T101-09-00	Mason Creek	Confluence of T101 upstream

## Mowing Contracts

*Vegetation cutting, also known as mowing, typically occurs in three cycles. Each cycle lasts approximately 40-45 calendar days. Each mowing sector is mowed once from start to end during each cycle. Starting dates may vary by about two weeks, and may be adjusted based on growth.*

Cycle	Description
1	Typically begins May 1
2	Typically begins July 15
3	Typically begins October 1

## Buyout Mowing

*Contractors began mowing buyout lots the first week of April 2004. Buyout lots are mowed once each month during the growing season, April through November. District contractors mowed 1428 lots in July, August, and September, 2004.*

## Citizen Service Center (713-684-4197)

Quarterly	July	Aug	Sept
Total SRs	241	206	216
SRs Closed	214	197	208

The Citizen Service Center handles calls related to Infrastructure and Property Management. As of June 2004, the Center is no longer counting telephone calls. This quarter, the Center generated a total of 663 service requests (SRs). Please see the table above for the monthly review.



## Contract Management

The Maintenance Engineering Department prepares bid packages and monitors contracts for maintenance-related (non-CIP) repairs. Contracts may encompass either single projects or multiple, smaller projects that have been batched together to create a contract that is attractive to bidders.

***The following projects are being designed:***

Channel	Project No.	Channel Name	Description
A120-03-00	X016	Tributary of Beamer Ditch	Erosion repairs
*B104-02-00	X007	Tributary of Horsepen Bayou	Fill voids (MCG)
B115-00-00	X007	Tributary of Armand Bayou	Slope repair
C118-03-00	X001	Tributary of Salt Water Ditch	PER
C127-00-00	X004	Tributary of Sims Bayou	Slope repairs
D112-00-00	X009	Willow Waterhole Bayou	Erosion repairs (MCG)
*E100-00-00	X048	White Oak Bayou	Slope repairs (Stude Park area; design complete, waiting on permit)
E100-00-00	X047	White Oak Bayou at Jersey Village	Slope erosion repair PER
E101-10-00	X002	Tributary of Little White Oak Bayou	PER
*E112-00-00	X008	Tributary of White Oak Bayou	Sinkhole repairs (MCG)
E115-00-00	X016	Brickhouse Gully	Concrete Channel Replacement - Phase I
E115-00-00	X020	Brickhouse Gully	Concrete Channel Replacement - Phase II PER
E116-00-00	X005	Tributary of White Oak Bayou	Slope erosion repairs
E122-00-00	X002	Tributary of White Oak Bayou	Erosion repairs
E125-00-00	X001	Rolling Fork	Outfall pipe replacement
E140-00-00	X013	Tributary of White Oak Bayou	Erosion repairs
E141-00-00	X011	Tributary of White Oak Bayou	Channel restoration
*E141-00-00	X013	Tributary of White Oak Bayou	Erosion repair (MCG) - Emergency access
*E500-04-00	X001	Detention Basin of White Oak Bayou	Desilt (MCG)
I101-00-00	X005	Little Vince Bayou	Channel erosion repair PER
J109-01-00	X005	Tributary of Spring Creek	Erosion repair, interceptor structure repair
K100-00-00	X026	Cypress Creek at Meyer Park	Channel restoration
K111-00-00	X009	Winding Creek/Turkey Creek	Slope erosion repair
K129-00-00	X005	Tributary of Cypress Creek	Installation of flap gates
K142-07-00	X003	Tributary of Faulkey Gully	Erosion repair
K143-00-00	X007	Anderson Ditch	Silt removal (MCG)
N100-00-00	X015	Carpenters Bayou	Rehabilitation alternatives PER
N111-00-00	X006	Tributary of Carpenters Bayou	Erosion repairs
P100-00-00	X048	Greens Bayou	Slope repair
P118-12-00	X003	Tributary of Halls Bayou	Cellular confinement – ROW acquisition
P118-18-01	X001	Tributary of Halls Bayou	Conversion to storm sewer
*P118-21-00	X002	Tributary of Halls Bayou	Erosion repair (MCG)
P125-00-00	X003	Tributary of Greens Bayou	Desilt
P125-04-00	X001	Tributary of Greens Bayou	Desilt
P134-00-00	X003	Tributary of Greens Bayou	Desilt
P135-00-00	X004	Tributary of Greens Bayou	Channel restoration
P145-00-00	X002	Tributary of Greens Bayou	Erosion repair
P145-03-00	X005	Tributary of Greens Bayou	Channel rehabilitation
P147-00-00	X005	Tributary of Greens Bayou	Erosion and sinkhole repair
P155-00-00	X001	Tributary of Greens Bayou	Channel rehabilitation
Q112-00-00	X013	Cary Bayou	Sheet pile wall repair

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## Contract Management — (continued)

Channel	Project No.	Channel Name	Description
T101-00-00	X017	Mason Creek	Pipeline relocation
T103-00-00	X006	Barker Reservoir	Channel restoration
T103-01-00	X003	Tributary of Barker Reservoir	Backslope rehabilitation
U101-05-00	X001	Tributary of South Mayde Creek	Channel restoration
U101-05-00	X002	Tributary of South Mayde Creek	(MCG) Repair Inlet
U101-06-00	X001	Tributary of South Mayde Creek	Channel restoration
U101-07-00	X003	Tributary of South Mayde Creek	Channel rehabilitation/storm sewer PER
*U101-07-00	X004	Tributary of South Mayde Creek	Pipe clearing (MCG)
U101-08-00	X001	Tributary of South Mayde Creek	Channel restoration
U102-00-00	X010	Bear Creek	Erosion repairs
U106-00-00	X009	Horsepen Creek	Sheet pile wall repair PER/ plans
*U106-11-00	X001	Tributary of Horsepen Creek	Desilt (MCG)
*W140-00-00	X006	Spring Branch	Fill Void (MCG)

\*Denotes new project this quarter. (MCG) denotes project for Maintenance Construction Group, the District's in-house construction group. PER stands for Preliminary Engineering Report.

**The following packages are preparing for bid:**

Project I.D.	Pct.	Channel Name	Description
Z100-00-00-X084	1	White Oak Bayou at Stude Park	Repair of concrete lining (awaiting permit)

**The following contracts have been completed in the past quarter:**

Project I.D.	Pct.	Project Description	Start Date	Substan. Complete
D139-04-01-X001	1		4/26/2004	8/9/2004
F101-03-00-X001	2		5/3/2004	7/23/2004

**The following contracts, previously awarded, are in progress:**

Project I.D.	Pct.	Start Date	Active section
Z100-00-00-X065	4-Jan	1/6/2004	Federal Maintenance General Repair Project: Channel Repairs on White Oak Bayou (E100-00-00); Designs complete for repairs on Vince Bayou (I100-00-00) and Little Vince Bayou (I101-00-00)
Z100-00-00-X069	1,4	10/18/2004	General Repairs (Awarded 8/10/04) <ul style="list-style-type: none"> <li>• P100-00-00</li> <li>• P126-00-00</li> <li>• P132-00-00</li> <li>• P133-01-00</li> <li>• P135-00-00</li> </ul>
Z100-00-00-X071	4	3/17/2004	<ul style="list-style-type: none"> <li>• Complete: P118-31-00, K140-02-00, P149-00-00, A120-05-00</li> <li>• Active: K133-00-00</li> </ul>
Z100-00-00-X072	4	10/25/2004	General Repairs (Awarded 8/10/04) <ul style="list-style-type: none"> <li>• P100-00-00</li> <li>• P137-00-00</li> </ul>
Z100-00-00-X080	2	10/4/2004	General Repairs (Awarded 8/10/04) <ul style="list-style-type: none"> <li>• G105-00-00</li> <li>• O105-00-00</li> <li>• P121-00-00 (Active)</li> </ul>

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## Contract Management (continued)

Project I.D.	Pct.	Start Date	Channels and Progress
Z100-00-00-X081	1,2		General repairs in SE Harris County (Awarded 10/5/04) <ul style="list-style-type: none"> <li>• A119-07-00</li> <li>• A120-04-00</li> <li>• B109-00-00</li> <li>• C128-00-00</li> <li>• G108-00-00</li> <li>• N110-00-00</li> <li>• P107-00-00</li> </ul>
Z100-00-00-X083	3		Channel rehabilitation of tributaries of Bear Creek (Awarded 10/5/04)
D100-00-00-X043	1,3,4	11/15/2004	General Repairs, Federal Maintenance on Brays Bayou (Awarded 9/14/04)
F103-00-00-X002	2	3/22/2004	Approximately 95% completed
K127-01-00-X001	4	8/2/2004	Channel restoration
N100-00-00-X016	2	8/18/2004	Channel slope restoration at Channelwood Park
P110-00-00-X001	2		Channel rehabilitation (bids opened 10/11/04)
T101-09-00-X001	3	2/10/2004	<ul style="list-style-type: none"> <li>• Channel Restoration on T101-09-00</li> <li>• Backslope swale regrading on T101-00-00</li> </ul>
W165-00-00-X004	3		Pre-construction meeting scheduled 11/17/04

## Mechanical/Electrical

The Maintenance Engineering Department monitors and maintains the mechanical and electrical systems of the District, including cathodic protection devices, flap gates, and the gated structure on the second outlook from Clear Lake. Project Status is noted below.

- ♦ Installation of a replacement groundbed and related improvements at rectifier #8 (Unit D139) was completed on 9/9/04.
- ♦ The installation of a bonding system on E100 at Championship Park was successfully bid and will be completed around 10/9/04.
- ♦ The status of the pumps at Unit J113 (North Gate Pump Station) are the same as before with #1 and #3 being fully operational, #2 at half capacity, and #4 operational but with a problem at its footing support.
- ♦ The bevel gear on gate #4 on the A200 gated structure went out on 8/13/04, which left the gate inoperable. Valve Systems and Controls, Inc., replaced the bevel gear and housing on 9/28/04. The gates are fully operational.
- ♦ A power supply problem has been found on rectifier #5 on Unit E100. I.A. is investigating the problem and will give us a full report on their findings.
- ♦ The pumps at Inverness Forest (K600) received some minor equipment repairs and maintenance. They are fully operational.
- ♦ Two flap gates located at Unit E100 near Hidden Lakes Town Homes were added to the M/E program. They were inspected and are functioning properly.





## Maintenance Construction Group

The Maintenance Construction Group (MCG) handles small repairs. These repairs typically take no more than three days to complete. In the past quarter, MCG has completed the following repairs:

Project I.D.	Channel Name	Activity/Repair
<b>Jul-2004</b>		
1. A136-00-00-X001	Tributary of Clear Creek	Mound removal
2. C127-00-00-X005	Tributary of Sims Bayou	Erosion
3. E132-02-00-X003	Tributary of White Oak Bayou	Sinkholes
4. C124-00-00-X004	Tributary of Sims Bayou	Slope erosion
5. E101-00-00-X014	Little White Oak Bayou	Rutts in yard
6. E101-00-00-X015	Little White Oak Bayou	Voids behind concrete liner
7. U102-02-00-X002	Tributary of Bear Creek	Desilt
8. U102-02-00-X001	Tributary of Bear Creek	Erosion
9. U101-03-01-X005	Tributary of So. Mayde Crk	Silt removal
10. P161-00-00-X005	Tributary of Greens Bayou	Sinkholes
11.E512-01-00-X001	White Oak Bayou Basin	Erosion
12.U101-00-00-X004	Tributary of So. Mayde Crk	Inlet tops
13.E132-00-00-X002	Tributary of White Oak Bayou	Pipe repair and sinkholes
14.P152-02-00-X004	Tributary of Greens Bayou	Slope erosion and B/S regrade
<b>Aug-2004</b>		
1. P152-02-00-X003	Tributary of Greens Bayou	Slope erosion
2. P149-00-00-X003	Tributary of Hoods Bayou	Slope erosion
3. P149-00-00-X004	Tributary of Hoods Bayou	Sinkholes and swales
4. P149-00-00-X005	Tributary of Hoods Bayou	Slope erosion
5. L105-00-00-X001	Tributary of Little Cypress Crk	Sinkholes
6. L105-00-00-X002	Tributary of Little Cypress Crk	B/S interceptors and pipes
7. O126-00-00-X002	Tributary of Goose Creek	Inlet tops
<b>Sep-2004</b>		
1. E121-01-00-X005	Tributary of Vogel Creek	Inlet tops
2. Z100-00-00-Y037	North Service Center	Excavation & swale build back along with granite block and berm work

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