

H C P I D

**Flood Control District
Capital Projects**

MEMORANDUM



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Houston, TX 77092
713-684-4000

DATE: May 25, 2011

TO: Arthur L. Storey, Jr., P.E.
Harris County Public Infrastructure Dept.

FROM: Michael D. Talbott, P.E. *MD Talbott*
Director *5/25/11*

RE: June 2011 – Capital Improvement Program Review

Key Findings and Recommendations

- It is recommended that Commissioners Court approve the list of projects to be pursued from currently available funds (\$419.4 million) as presented in Appendix A of the attached report.
- It is recommended that Commissioners Court provide new funding of \$70 million in order to initiate critical right-of-way acquisition on three projects and to begin construction of the channel improvements on the Hunting Bayou Federal Flood Damage Reduction Project.
- The District has currently available funding of about \$419.4 million, which provides a reasonable slate of projects for the next few years. However, project spending will begin to tail off rapidly in the last few years of the 5-year CIP.
- Funding of the District's Capital Improvement Program (CIP) has been enhanced due to the receipt of about \$25.4 million in active FEMA grants, with another \$32.5 million available to us as these programs move forward. New funding available from pending FEMA grants total \$52.2 million. Corps reimbursements have totaled \$18.8 million with interest and watershed impact fees contributing another \$5 million.
- It is recommended that Commissioners Court consider reliable and predictable annual funding of \$200 million for capital projects for an aggressive and appropriate program (about \$170 million from local funds and \$30 million from partnerships).
- It is recommended that the District continue with the Corps of Engineers partnership project elements programmed from currently available funds. As future District CIP funding is identified and available, the pace of spending on federal projects will be evaluated with consideration of District funding capabilities and the outlook for Congressional appropriations.
- The number of dynamic changes started in the 2010 CIP cycle is expected to continue in the coming years as HCFCD adapts to the changing economic climate in Harris County. Our goal is to be effective stewards of the public trust and to create a framework to plan, design and build \$200 million of flood control infrastructure on an annual basis.

Capital Projects Report

The June 2011 Capital Improvement Program Review report is attached, which includes supporting documentation for currently available funds; recommendations for “active projects” to be executed from currently available funds; recommendation for new funds to execute four critical projects; supplemental projects that would be active if funding were available at recommended levels; a section on federal projects; and information regarding future projects. Also included are maps of general project locations in the county and specific project maps for select watersheds.

Flood Damage Reduction Overview

Funding for District-related flood damage reduction projects from all sources (spent or currently available) has totaled nearly \$1.8 billion in the past 24 years. Nearly \$1.5 billion of that amount has been provided in just the past 11 years. Included in the numbers are direct federal spending of \$234 million, federal reimbursements to the District of \$88.8 million, and FEMA grants of \$160 million. In addition, the District has pending FEMA grants of about \$52.2 million.

That investment has made a tremendous difference in reducing damages from several major storm events over that period alone, plus a permanent reduction of future losses. It's estimated that the more recent investment has saved an estimated \$2 billion in avoided damages so far; damages that would have resulted had the projects not been implemented. The major projects have also added significant opportunities for popular open space and recreational use.

Currently Available Funding – Recommended Projects

The District has “currently available funding” of about \$419.4 million. Total funding for the 5-year spending schedule shown in Appendix A includes about \$46.3 million already spent this fiscal year (March 1st through April 11th) bringing the 5-year total amount of available funds to about \$373.1 million.

Funding of the District's Capital Improvement Program (CIP) has been enhanced due to the receipt of about \$25.4 million in active FEMA grants, with another \$32.5 million available to us as these programs move forward. New funding available from pending FEMA grants total \$52.2 million. Corps reimbursements have totaled \$18.8 million with interest and watershed impact fees contributing another \$5 million. It is anticipated that some level of continued enhancement to the CIP funding availability will occur as Corps reimbursements, interest and watershed impact fees continue. The level of contribution from these sources is extremely volatile at this time due to uncertainties in the economy and the Federal budget.

Projects recommended for funding from currently available funds have been selected from the “candidate project list” presented a few years ago (plus any other identified priority projects). All projects not being pursued from currently available and pending funds have been moved into a “future projects” classification.

The list of recommended projects to execute from currently available funds is included in the attached report as Appendix A.

New Funding – Critical Project Needs

This year, \$70 million in new critical project needs have been identified. These project activities are considered critical due to the nature of and opportunity for necessary land acquisition, or to initiate channel construction on a Federal partnership project. Appendix C, Table 1, identifies elements of four specific projects recommended for funding in the FY 2011-12 CIP.

Recommended Projects for a Fully-Funded 5-Year CIP

The HCFCD has identified projects that would be recommended for the 5-year CIP if it were fully funded to the recommended level of \$200 million per year. That gap in funding is the difference between recommended funding levels for the 5-year CIP of \$1 billion and the currently available (\$419.4 million) plus requested new funds (\$70 million), or about \$500 million.

The list of recommended projects to fill out the 5-year CIP is included in Appendix C as Table 2.

Beyond the 5-Year CIP

In addition to the 5-year CIP, the District has identified through its Watershed Master Planning process at least \$12 billion in projects to bring our systems to at least a 25-year level of protection. That funding would be a combination of District funds and partnerships, along with implementation by land development activities. More details on this program will be provided in future CIP review documents.

Next Funding

The District has currently available funding of about \$419.4 million, which provides a reasonable slate of projects for the next few years. However, project spending will begin to tail off rapidly in the last few years of the 5-year CIP. Of the \$70 million requested now for critical project needs, \$60 million would be spent in the first year on right-of-way acquisition.

All currently available CIP funding is being directed to bringing active projects to a logical stopping point (typically, construction). Advance work for future projects (unfunded) is not being conducted (engineering, right-of-way, etc.). Most of the currently available CIP funds are being spent on land and construction related elements (86%). Once future CIP funding is identified and available, it will take a few years to gear back up for the next series of construction projects.

It is recommended that the District's next capital projects funding source and amount be identified and available as soon as possible. This will provide continuity in project implementation at an appropriate pace and avoid a significant gap in CIP implementation.

Recommended Funding Level

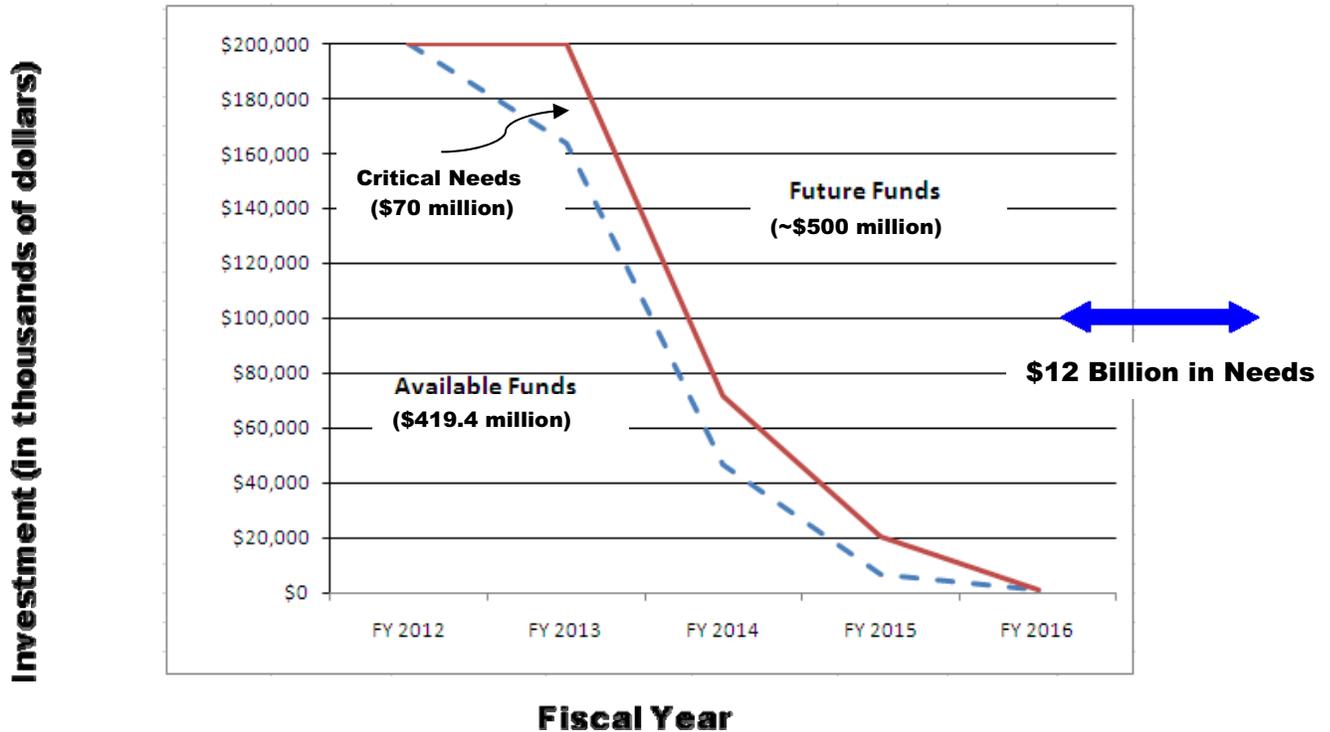
Reliable and predictable annual District CIP funding from all sources of about \$200 million is recommended. This represents funding from District/County sources of about \$170 million and \$30 million from other sources (primarily federal). This recommendation is based on the following considerations:

- An aggressive CIP is appropriate for the next several decades to manage and mitigate the natural threat of flooding.
- The foundation of District funding for many years to come must be the federal projects which alone can demand about \$100 million per year. These projects bring at least 50% and as much as 75-90% federal financial participation.
- At the same time, funding levels at the Federal level remain sluggish resulting in an increased pressure to manage the flooding problems with local resources. The recommended level of funding will also allow us to capitalize on partnerships with local and state governments.
- At this funding level, measured progress can be made for all project categories (federal partnerships, District main channel projects, tributary projects, major maintenance, and auxiliary projects to support local government projects).
- Even at this funding level, "capital rationing" will occur because there are more projects (and the capability to produce them) than funding allows.
- There is an increased public awareness of the flooding threat and an expressed willingness to fund effective projects to reduce the threat.
- There is support for popular multi-use and quality-of-life initiatives on District property (by appropriate sponsors) that the CIP helps enable.
- There is support from watershed and neighborhood organizations, the Greater Houston Partnership, environmental organizations, and quality-of-life interests.

Attachment: June 2011 CIP Report

June 2011 CIP Transmittal.doc

5 Year CIP Plan



VII. FINANCIAL SUMMARY

Available Funding

The District receives funding for its projects through a combination of bond funds, cost-sharing partnership arrangements with other entities, and commercial paper. There are residual funds available from Harris County bonds issued in 2004 and in 2007. Reimbursement from cost-sharing partnerships include efforts with federal, state and local sponsors. In addition, the District manages several impact fee arrangements which accommodate the development in certain watersheds for a cash fee to reimburse the District for prior investments in building infrastructure. Funds collected through impact fees must be expended within those watersheds. The sum total of all these resources represents the total available cash for Capital Improvement Programming. For purposes of presentation, the District has, for the past several years, presented this information as of a consistent date being April 11 of the fiscal year.

Available Cash by Fund for capital improvement projects as of April 11, 2011:

Fund	Total Cash	Encumbered	Programmed	To Be Programmed
3310 – Reimbursement	\$58,621,539	\$13,687,951	\$17,023,281	\$27,910,307
3320 – Bond	\$11,238,726	\$3,801,920	\$2,528,829	\$4,907,977
3330 – HCFCB Bond	\$36,084,345	\$9,311,675	\$24,374,650	\$2,398,020
3970 – Comm. Paper	\$266,208,428	\$9,992,501	\$190,198,275	\$66,017,652
FEMA Grants	\$32,512,492	\$2,291,153	\$30,221,339	\$0
Total	\$404,665,530	\$39,085,200	\$264,346,374	\$101,233,956

Available Impact Fee Funds for watersheds with an adopted regional program as of April 11, 2011:

Watershed	Total Cash	Encumbered	Programmed	To Be Programmed
Brays Bayou	\$865,205	\$0	\$35,721	\$829,484
Cypress Creek	\$3,873,392	\$0	\$363,080	\$3,510,312
Greens Bayou	\$2,052,145	\$10,000	\$25,370	\$2,016,775
Langham Creek	\$2,886,437	\$63,309	\$2,579,999	\$243,129
Sims Bayou	\$2,400,990	\$966,137	\$591,855	\$842,998
White Oak Bayou	\$2,699,428	\$713	\$0	\$2,698,715
Total	\$14,777,597	\$1,040,159	\$3,596,025	\$10,141,413

Total Available Funds from all sources as of April 11, 2010:

All Funds	Total Cash	Encumbered	Programmed	Contingency & Escalation
	\$419,443,127	\$40,125,359	\$267,942,399	\$111,375,369

Of the monies in Contingency and Escalation, about \$66 million will be programmed against identified and approved projects within the next 30 to 60 days and \$14 million is tied to watershed impact fee projects. So, while Available Funding appears to be a significant amount, it is important to realize that virtually 89% of the available funding is currently or will soon be programmed against existing, identified projects, and only 11% is available for contingency and escalation.

Programming of Available Funds

The District programs available funds to specific studies and projects as approved by Harris County Commissioners Court. These may include continuing progress on multi-year mega-projects or executing studies and projects more narrow in scope. A discussion of the District's CIP Portfolio Management approach is presented as Appendix D.

A certain amount of flexibility in project implementation is appropriate when demand for funds exceeds the availability of funds, as is the case with flood control needs. At times throughout the year opportunities present themselves when our funding partners create possibilities to leverage project funds. To allow for such opportunities flexibility is important in programming funds to individual projects to allow for adjusting the expenditures between Program Categories as needed. As a practice, funds are only authorized against a project when it is fairly certain to complete that project with available funding.

The District recommends continuation of programming the currently available funds to the projects in Appendix A including both the table of active projects as well as the projects identified in the 2010 CIP document and as depicted by project sheets in Appendix A. Appendix A figures include FY 2010-11 funds already spent as of April 11, 2011 of about \$46.3 million). The funding is allocated towards the following project categories.

Programming by Category

Category	Available Funds	Percent of Total Funds
1. Federal Flood Damage Reduction Projects	\$109,371,640	26.1%
2. FEMA Mitigation Grants	\$69,474,807	16.6%
3. Main Channel Flood Damage Reduction Projects	\$39,772,723	9.5%
4. Tributary Flood Damage Reduction Projects	\$71,111,539	17.0%
5. Major Maintenance Projects	\$85,000	0.0%
6. Floodplain Acquisition and Preservation Projects	\$7,267,612	1.7%
7. Frontier Projects	\$2,834,131	0.7%
8. & 9. Local Participation Projects	\$8,150,306	1.9%
Contingency and Escalation Funds	\$111,375,369	26.6%
Total	\$419,443,127	100.0%

Programming by Activity

Activity	Available Funds	Percent of Total Funds
Feasibility Studies	\$16,877,090	4.0%
Project Development Phase	\$3,798,554	0.9%
Design Phase	\$4,554,747	1.1%
Right-of-Way Acquisition	\$102,318,887	24.4%
Utility/Pipeline Adjustments	\$12,045,677	2.9%
Construction Phase	\$149,822,290	35.7%
Turnover & Startup Phase	\$8,022,708	1.9%
Support Activities	\$10,627,805	2.5%
Contingency and Escalation Funds	\$111,375,369	26.6%
Total	\$419,443,127	100.0%

Programming by Fund

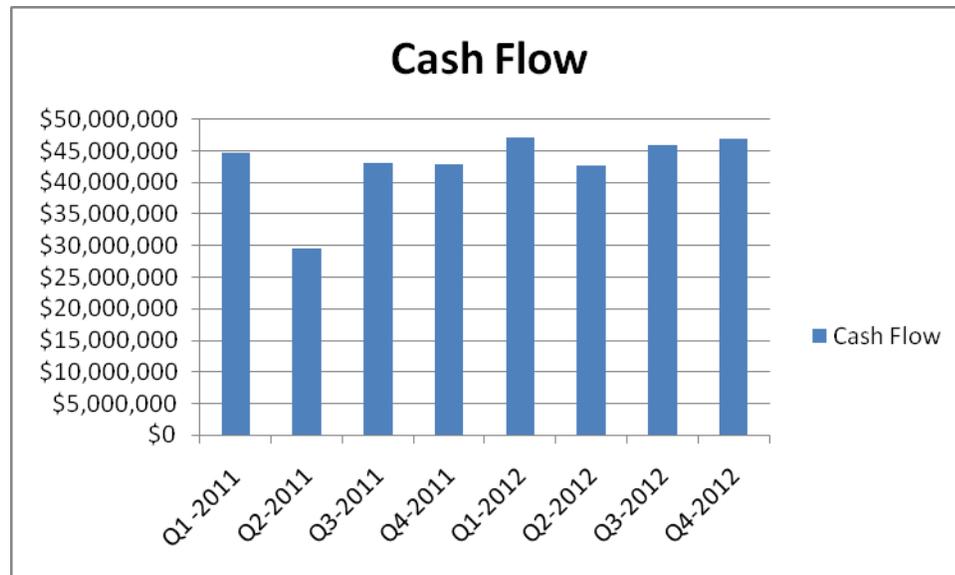
Fund	Available Funds	Encumbered	Programmed
3310 – Reimbursement	\$58,621,539	\$13,687,951	\$44,933,588
3320 – Bond	\$11,238,726	\$3,801,920	\$7,436,806
3330 – HCFCD Bond	\$36,084,345	\$9,311,675	\$26,772,670
3970 – Commercial Paper	\$266,208,428	\$9,992,501	\$256,215,927
FEMA Grants	\$32,512,492	\$2,291,153	\$30,221,339
Impact Fees	\$14,777,597	\$1,040,159	\$13,737,438
Total	\$419,443,127	\$40,125,359	\$379,317,768

Programming by Watershed

Watershed	Available Funds	Percent of Total Funds
Addicks Reservoir	\$9,616,911	2.3%
Armand Bayou	\$11,379,182	2.7%
Barker Reservoir	\$1,002,466	0.2%
Brays Bayou	\$48,480,657	11.6%
Buffalo Bayou	\$30,552,525	7.3%
Carpenters Bayou	\$0	0.0%
Cedar Bayou	\$0	0.0%
Clear Creek	\$14,085,508	3.4%
Cypress Creek	\$4,901,348	1.2%
Galveston Bay	\$1,504,394	0.4%
Goose Creek & Spring Gully	\$506,081	0.1%
Greens Bayou (Without Halls Bayou)	\$33,079,903	7.9%
Halls Bayou	\$11,734,370	2.8%
Hunting Bayou	\$9,997,954	2.4%
Jackson Bayou	\$0	0.0%
Little Cypress Creek	\$46,565	0.0%
Luce Bayou	\$0	0.0%
San Jacinto River	\$4,292,050	1.0%
Sims Bayou	\$41,154,348	9.8%
Spring Creek	\$621,870	0.1%
Vince Bayou	\$0	0.0%
White Oak Bayou	\$20,108,735	4.8%
Willow Creek	\$200,092	0.0%
County Wide	\$64,802,799	15.4%
Contingency and Escalation Funds	\$111,375,369	26.6%
Total	\$419,443,127	100.0%

Cash Flow Analysis

Based on the currently identified and approved project list submitted in the 2010 CIP budget, the following graphic depicts the proposed cash flow. The dollar amount reflects not only the new \$200 million provided in October 2010, but also the prior funding obligated for prior projects and the monies collected from watershed impact fees.



VIII. FUTURE PROJECTS AND PROGRAMMING NEEDS

The total capital programming needs to resolve risk of flooding in Harris County are a function of the level of risk and the overall cost the community is willing to accept.

District technology developed from its Watershed Master Plan has allowed it to estimate the overall future needs for flood reduction projects. This same technology has allowed us to quantify the benefits of the work we have accomplished. In return for the \$1.5 billion expended over the past 11 years, more than \$2.0 billion has been identified in avoided damages. The flood reduction work is resulting in modifications to the floodplain maps that will remove the floodplain from as many as 30,000 homes, and reduce the risk of flooding to tens of thousands of other homes.

The Watershed Master Plan tools have also helped to identify the level of service, or the reliability of our current flood reduction systems. Many areas of the county will still experience flooding in storms as frequent as a 2-year or 5-year event. It is estimated that to provide a standard level of service that protects against a 25-year storm event will take as much as \$12 billion in District-sponsored and other-party sponsored projects. Such a level of investment is ambitious regardless of the timeframe under which it can be accomplished. The District's goal is to be able to plan, design and

construct projects at the pace of \$200 million annually in a reliable and predictable manner.

Prioritizing these needs for implementation is a dynamic process as the number of structures at risk, improvements in technology, trends in development, rate of decay of existing facilities, opportunities to partner with other agencies and, of course, availability of funding change throughout time. In order to keep pace with these changing priorities the District develops its 5-year CIP and updates it annually.

Reliable and predictable annual District CIP funding from all sources of about \$200 million is recommended. This represents funding from District/County sources of about \$170 million and \$30 million from other sources (primarily federal). This recommendation is based on the following considerations:

- An aggressive CIP is appropriate for the next several decades to manage and mitigate the natural threat of flooding.
- The foundation of District funding for many years to come must be the federal projects which alone can demand about \$100 million per year. These projects bring at least 50% and as much as 75-90% federal financial participation.
- At the same time, funding levels at the federal level remain sluggish resulting in an increased pressure to manage the flooding problems with local resources. The recommended level of funding will also allow us to capitalize on partnerships with local and state governments.
- At this funding level, measured progress can be made for all project categories (federal partnerships, District main channel projects, tributary projects, major maintenance, and auxiliary projects to support local government projects).
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