



# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

5000 OVERLOOK AVENUE, S.W., WASHINGTON, D.C. 20032

OFFICE OF THE GENERAL MANAGER

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January 28, 2005

Jon M. Capacasa, P.E.  
Environmental Protection Agency  
Region III  
3WP00  
1650 Arch Street  
Philadelphia, PA 19103-2029

Dear Mr. Capacasa:

I am pleased to submit the outline of DCWASA's proposed Flushing Plan for 2005. This plan is designed to complete the flushing program that commenced shortly after the initiation of the orthophosphate feed by the Washington Aqueduct in August 2004 but was not completed before the onset of freezing weather due to institutional and operational problems. In addition, this program's record keeping will be integrate with the results of the present water quality monitoring program in a effort to form the ground work for a 2006 flushing program based on indicated water quality needs in the system rather than a rote flushing schedule.

It is proposed that DCWASA submit its 2006 Flushing Program to Region III by January 31, 2006 and it is expected that this submittal will include a tiered approached based on the data collected in the OCCT monitoring program as well as any other available data.

The sequence of events associated this proposed program are as follows:

1. DCWASA is presently pursuing contracts with both CH2MHill and flushing contractors.
2. DCWASA will begin cleaning and marking valve pits, insuring that all valves and hydrants are in working order within two weeks. This will minimize delays once actual flushing commences.
3. Flushing is scheduled to ~~commence on April 3, 2005.~~
4. Prior to the start of flushing CH2MHill will insure the initiation of the flushing will be consistent with the work completed in 2004.
5. CH2MHill will collate the existing reports and evaluate the storage program for the 2004 data, as well as future data, to insure that it will placed in a data base that will provide easy access for future statistical review.

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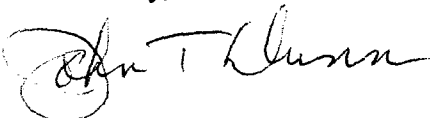
6. It is proposed that reporting of progress to USEPA be done on a specific time basis as opposed to a percentage basis. The following reporting dates are recommended:
- a) May 15, 2005
  - b) July 1, 2005
  - c) September 15, 2005
  - d) November 1, 2005

The attached diagram indicates the resources that DCWASA is committing to the program by April 1, 2005. Based on production results the contractor forces will be adjusted as necessary to remain on schedule for an October 1<sup>st</sup> completion. This completion date will allow for any additional work indicated before the onset of cold weather.

DCWASA will provide Region III the requested 2004 data on zones flushed in 2004 as soon as CH2MHill can collate that data. Future data will be submitted in electronic format with required reports.

As DCWASA is moving ahead to develop contracts and resolve union issues, it is requested that Region III respond to this proposal as soon as possible.

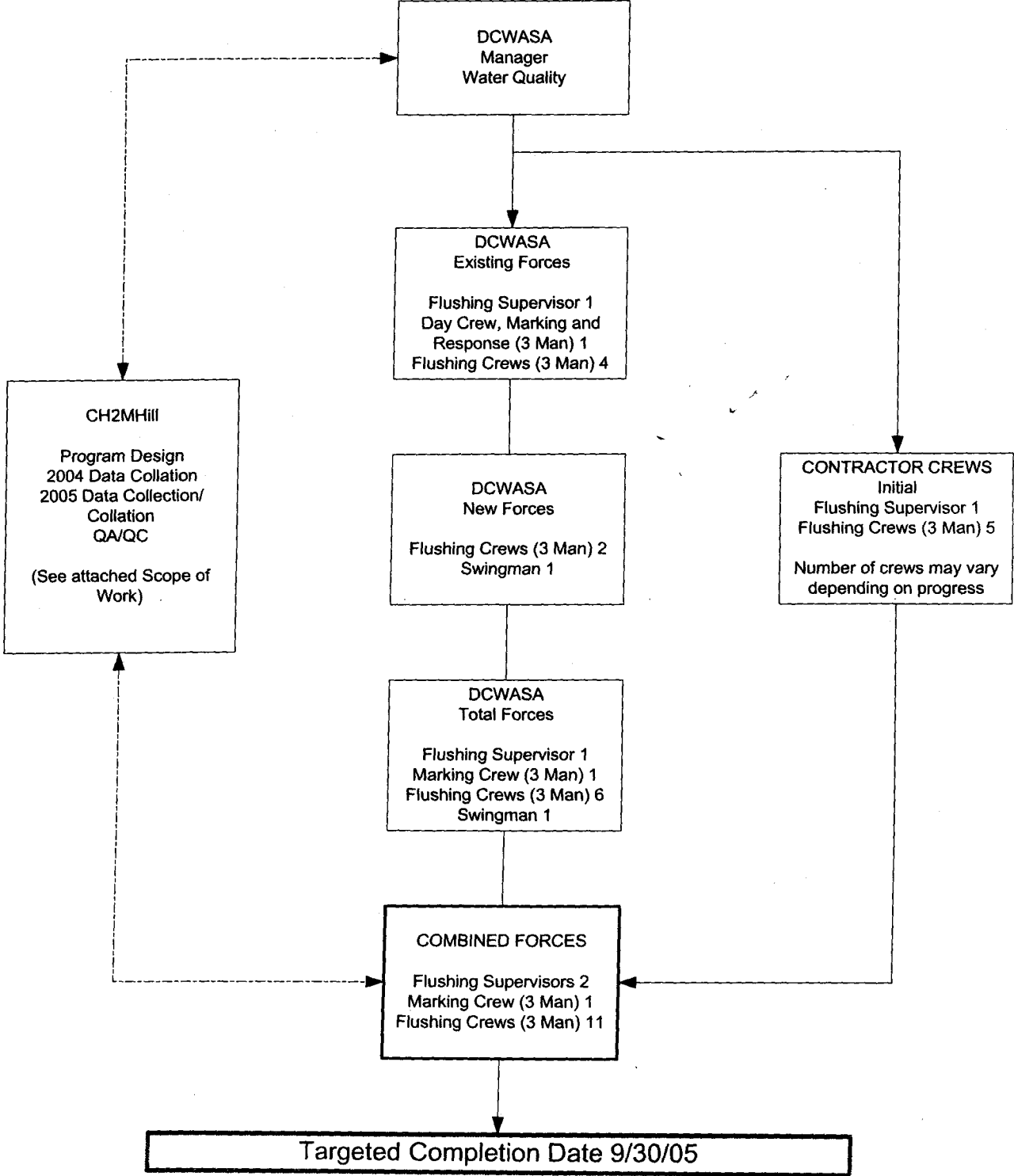
Sincerely,



John T. Dunn, PE  
Chief Engineer/  
Deputy General Manager

Attachment

**DCWASA 2005 SERVICE MAIN UNIDIRECTIONAL FLUSHING PROGRAM  
Resource Availability**



**DC Water and Sewer Authority**  
**Uni-Directional Distribution System Flushing Program Assistance**  
**Scope of Work**

DRAFT

CH2M Hill will perform the following Tasks to provide assistance to DCWASA associated with the Authority's year 2005 Uni-Directional Distribution System Flushing Program (UDDSFP):

- Task 1.0**      **Review and document the results of DCWASA's year 2004 UDDSFP.** CH2M Hill will record all: Flushing Zones (FZs) 100-percent completed in 2004, FZs less than 100-percent completed including the points at which flushing operations ceased and, all FZs in which no work was conducted. Additionally, all hydrants and appurtenances (valves, valve nuts, etc.) either found to be inoperable or, not located during 2004, will be documented. The documentation for year 2004 will be presented to DCWASA staff as a technical memorandum.
- Task 2.0**      **Develop year 2005 UDDSFP.** Using the results obtained in Task 1.0 CH2M Hill will develop the year 2005 UDDSFP to include:
- DCWASA Flushing Crew starting locations;
  - Development of year 2005 initial flushing schedule;
  - Communications Plan; and
  - UDDSFP overview and description. This document will be developed to provide an understanding of what the program is meant to provide in terms of a thorough cleaning of distribution system piping and the associated benefit to water quality.
- Task 3.0**      **Provide on-going assistance.** CH2M Hill will provide DCWASA with the following assistance through out the 2005 UDDSFP:
- Maintain a running three-week running flushing crew schedule. This schedule shall be provided to the DCWASA Program Manager at weekly meetings;
  - Define existing flushing instructions to the flushing crews. This will include definition of distribution system hydrant flushing times and the methodology to be used to determine when a flush is completed;
  - Attend weekly meetings. Meetings will be held weekly at DCWASA Facilities on a date and time to be determined by the DCWASA Program Manager. CH2M Hill will record and distribute meeting minutes to all attendees electronically within three business days

following each meeting. The meeting discussion will include program progress, issues encountered and, schedule updates.

- Maintain and update a distribution system FZ completion map. The map will include all UDDSFP years 2004 and 2005 completed FZs. Percent completion of Pressure Zones and total distribution system will be calculated weekly and included in the weekly meeting minutes.

**Task 4.0**     **2005 UDDSFP Completion.** Following completion of the 2005 program, CH2M Hill will document the results for both years 2004 and 2005. The documentation will contain a summary of all completed UDDSFP FZs by year with percent completion by pressure zone and distribution system, a summary of distribution system conditions including non-located or damaged hydrants and appurtenances and, recommendations for any potential program improvement.

**Task 5.0**     **Optional Services.** At DCWASA's request, CH2M Hill can provide a full-time uni-directional flushing "superintendent/instructor". This staff member would randomly accompany (alternate between crews) DCWASA crews and offer suggestions and recommendations to the crews regarding flushing and safety. During the start-up phase this staff member would also be available to train flushing crews in the use of equipment and proper flushing procedures.

**Schedule:**     It is anticipated that this project will commence in January, 2005 and be completed in December, 2005.

**Budget:**         **With Optional Task:     \$460,000 to \$510,000**

**Without Optional Task:     \$275,000 to \$325,000**

**These are estimates based on what it cost on the CONTI job and need to be refined.**