

City of Alexandria, Virginia

MEMORANDUM

11
6-25-02

DATE: JUNE 13, 2002

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: PHILIP SUNDERLAND, CITY MANAGER *PS*

SUBJECT: APPLICATION FOR A FEDERAL ENVIRONMENTAL PROTECTION AGENCY GRANT IN THE AMOUNT OF \$900,000 FOR THE FOUR MILE RUN SEWER SERVICE AREA EXCESSIVE INFILTRATION/INFLOW (I/I) REMEDIATION PROJECT

ISSUE: City Council consideration of an application for a grant from the United States Environmental Protection Agency in the amount of \$900,000 to assist in remediating infiltration/inflow (I/I) conditions in the Four Mile Run Sewer Service area.

RECOMMENDATION: That City Council:

1. authorize the City Manager to apply for federal assistance; and
2. authorize the City Manager to execute a grant agreement with the United States Environmental Protection Agency in the amount of \$900,000 for the project.

BACKGROUND: In 2000, the City began a multi-year program to remediate inflow and infiltration in the sanitary sewer system in three major areas of the City: Four Mile Run Sewer Service Area, Commonwealth Interceptor, and Holmes Run Trunk Sewer (Attachment 1). The Federal Clean Water Act prohibits sewage overflows into streams from separate sanitary sewer systems. The City's program to reduce and control excessive infiltration and inflow (I/I) will maintain the required compliance with laws and regulations.

The City's remediation program started with the Four Mile Run Sewer Service Area, which is located in the northerly part of the City as shown in Attachment 1. Flow monitoring and field investigations showed that the Four Mile Run Area has excessive infiltration/inflow (I/I). Infiltration is defined as groundwater that enters sanitary sewers through leaks in pipes, and inflow is stormwater that is directed to the sanitary sewer through connections such as roof downspouts, driveway drains and groundwater sump pumps. During wet weather, such excessive inflow and infiltration negatively impact the capacity of the sewer system to adequately handle the sanitary sewer flow which can cause such adverse conditions as flooded basements, the discharge of sewage into the streets and waterways and the over loading of the sewage treatment plant.

The City has now completed its studies in the Four Mile Run Sewer Service area to identify sources of the I/I and continues to conduct such extensive studies for the Commonwealth Interceptor and Holmes Run Trunk Sewer Service Area. Studies for the Four Mile Run Service Area have included flow monitoring at multiple locations, closed circuit television (CCTV) inspections of all sanitary sewers, manhole inspections, dye testing and smoke testing. The work involved:

- CCTV inspection of approximately 30 miles of sanitary sewers,
- 944 manhole inspections; and
- Surveys of 6,544 properties

The studies indicate a need for rehabilitation measures to reduce the infiltration/inflow into the sanitary sewers.

The process also includes an extensive public outreach program to inform the public of the problems and impacts caused by excessive I/I. Brochures were prepared and meetings held with citizen groups to inform them of the causes and results of the excessive I/I, the purpose and objectives of the field investigations, schedules and testing procedures. The information program focused on the benefits of reducing I/I.

DISCUSSION: The next phase of the Four Mile Run project is to begin the remediation. In November of 2001, Congressman James Moran notified the City that, at his initiative, Alexandria would be receiving \$900,000 from the U.S. Environmental Protection Agency (EPA) for reconstructing aging sanitary sewer lines for the protection of water quality in Four Mile Run. In order to award the grant, EPA requires that the City submit an application, even though the funds have already been appropriated.

The \$900,000 from the EPA grant will be combined with City monies to do the remediation work in the Four Mile Run Service area. The Four Mile Run remediation project will include the following measures:

- Removal of tree roots from existing sewer pipes.
- Internal repair of joints, pipes and connections between street sewers and laterals.
- Internal repair of manholes and prevention of the entrance of surface run-off through covers and cracked pavement joints.

It is estimated that approximately 51,000 feet of sanitary sewer will be included in the remediation along with about 800 manholes.

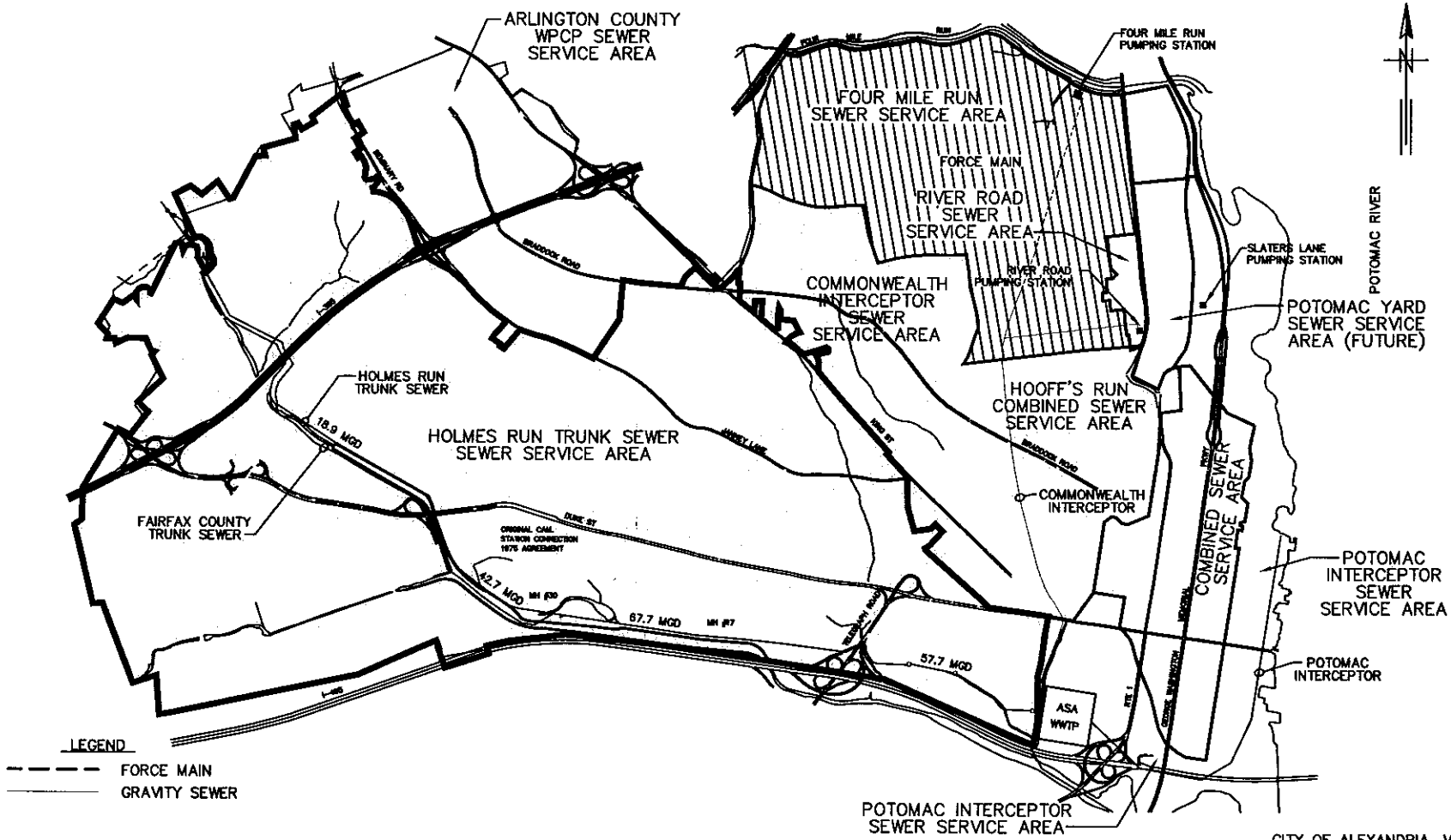
The \$900,000 from EPA requires a minimum match by the City of \$739,400. This will be satisfied by the \$5,027,000 that is planned in the City's Capital Improvement Program through FY 2008 to correct infiltration/inflow problems in the City's sewer system. In FY 2003, \$3,327,000 in City funds is budgeted for I/I.

FISCAL IMPACT: The \$900,000 grant from the Environmental Protection Agency requires a City match of \$739,400. This match will come from the City's FY 2003 to FY 2008 Capital Improvements Program (CIP) which contains \$5,027,000 through FY 2008 to correct infiltration/inflow.

ATTACHMENT: Map of the Trunk Sewers and Sewer Service Areas

STAFF: Richard J. Baier, P.E., Director, T&ES
Emily A. Baker, P.E., City Engineer, T&ES

FIGURE 1



TRUNK SEWERS AND SEWER SERVICE AREAS
IN ALEXANDRIA

CITY OF ALEXANDRIA, VIRGINIA
 DEPARTMENT OF TRANSPORTATION
 AND ENVIRONMENTAL SERVICES
 FOUR MILE RUN I/I STUDY
 EXECUTIVE SUMMARY
 DECEMBER 2001

X



Kerry J. Donley
Mayor

William C. Cleveland
Vice Mayor

Members of Council
Claire M. Eberwein
William D. Euille
Redella S. Pepper
David G. Speck
Joyce Woodson

The Honorable James P. Moran
House of Representatives
2239 Rayburn House Office Building
Washington, D.C. 20515

Dear Congressman Moran:

At the Regular Meeting of City Council held on Tuesday, June 25, 2002, Mayor Donley requested that the City Clerk convey to you the City Council's appreciation and thanks for your efforts and initiative on the City's behalf in acquiring the \$900,000 grant from the Environmental Protection Agency for the Four Mile Run sewer service area excessive infiltration/inflow remediation project.

Many thanks for all that you do in the interest of the citizens, as well as the City of Alexandria, in making it a better place in which to live, work and play. Your efforts and dedication do not go unnoticed and are much appreciated.

Sincerely,

Beverly I. Jett, CMC
City Clerk and Clerk of Council

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6-25-02

R.F. 6/25/02

City of Alexandria, Virginia
301 King Street, Suite 2300
Alexandria, Virginia 22314

June 27, 2002



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City Clerk and
Clerk of Council
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