

**Proposed Project for Application to the Kansas Department of Health and Environment
for the Kansas Public Water Supply Loan Fund and to the Kansas Department of
Commerce for a grant**

Applicant: City of Osage City
Phase II Water System Improvements
Project No. 03-PF-306

Contact Person: Donna J. Crawford
Address: Governmental Assistance services
905 Joseph Dr.
Lawrence, KS 66049

Sent to the Kansas Geological Survey for environmental review.

Agency Review Comments:

Any short-term adverse impacts during construction activities in the project should be offset by the long-term benefits of the improvements to the water supply and distribution system.

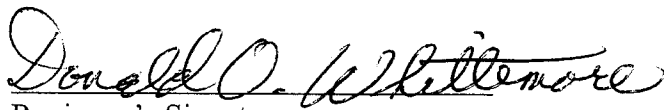
Recommended Action:

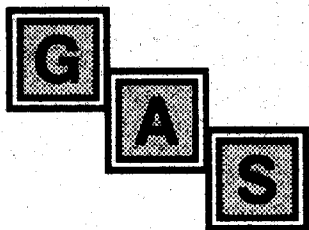
- ☒ Clearance of project should be granted
☐ Clearance of project should not be granted
☐ Clearance of project should be delayed until the issues or questions have been clarified
☐ Clearance of project should not be delayed, but the applicant (in the application) should address or clarify the questions or concerns indicated above

Donald O. Whittemore
Reviewer's Name

Geohydrology Section, Kansas Geological Survey
Division/Agency

3/12/03
Date


Reviewer's Signature



Governmental Assistance Services

905 Joseph Drive

Lawrence, Kansas 66049

785-832-2141 • Fax 785-832-1111

Toll Free 888-832-3335

e-mail: gasdonnaa@aol.com

February 26, 2003

Dr. Lee Allison
Kansas Geological Survey
University of Kansas
1930 Constant Ave. – Campus West
Lawrence, KS 66047

RE: Environmental Review – City of Osage City, KS Phase II Water System
Improvements #03-PF-306

Dear Dr. Allison:

The City of Osage City, Kansas has received a Kansas Dept. of Commerce grant for 2003 to complete the second phase of their water system improvements. During the second phase of the project the city plans to install 11,330 LF of 8" and 9524 LF of 6" PVC plastic water lines, 33 fire hydrants, 256 service lines & connections, 72 gate valves, street crossings, miscellaneous work and appurtenances to upgrade the existing 88 year old iron water lines. The total project cost is \$900,000. KDHE's participation in the project is in the amount of \$500,000 and the KDOC grant is for \$400,000.

Please note the attached map showing Phase II improvements. I am also attaching an environmental write-up completed by Kramer Engineering.

The city is requesting your clearance of the project so a release of funds can be requested. Please submit all your comments to my office at Governmental Assistance Services, 905 Joseph Dr., Lawrence, KS 66049.

If you should have questions, please call my office at 888-832-3335.

Sincerely,

Donna J. Crawford
Grant Administrator

Enc/ Engineering Report Info
Construction Map
Topographic Map

**PRELIMINARY
ENGINEERING REPORT**

**WATER DISTRIBUTION SYSTEM
IMPROVEMENTS**

2003 CDBG PROJECT

CITY OF OSAGE CITY, KANSAS

ENGINEERS:

**KRAMER ENGINEERING, P.A.
2348 SW Topeka Blvd.
Topeka, Kansas 66611
(785) 234-6600**

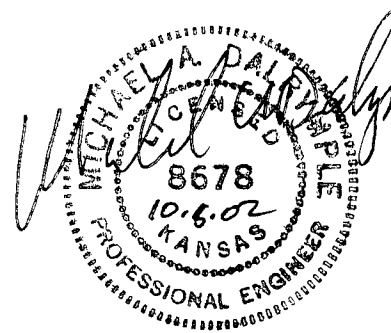


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SECTION I INTRODUCTION

PURPOSE AND SCOPE

This preliminary engineering report is the record of a study, authorized by the governing body of Osage City, to determine improvements needed to the City's water distribution system to improve water quality and adequate water flows for fire protection.

The scope of the study covers the following general items:

- Update map of water distribution system.
- Prepare a computer hydraulic model of the water distribution system to perform hydraulic analysis of the system to provide water service and fire flows.
- Field check actual flow from selected fire hydrants to calibrate computer model.
- Review alternatives and recommend improvements needed to distribution system to improve water quality and provide adequate fire flows for all areas in the City.
- Prepare probable project cost for recommended water distribution system improvements.
- Provide general information on financing improvements, recommended financing plan and possible user charges to pay for improvements.

PHASING OF IMPROVEMENTS

Phase I improvements will replace approximately 14% of the existing water distribution system. Phase I construction is being financed by a \$400,000 2002 CDBG and \$500,000 KPWSLF loan from KDHE. Phase I construction bids were opened September 10, 2002, Notice to Proceed was issued October 8, 2002 and construction should begin by October 23, 2002 and be completed by June 15, 2003.

Proposed Phase II improvements will replace another 12% of the water distribution system and the improvements are needed to alleviate water distribution system problems reported herein. Phase II improvements are being paid for by a proposed \$400,000 CDBG grant and a \$500,000 KPWSLF loan from KDHE.

Osage City has an approved KPWSLF loan from KDHE for a total amount of \$2,036,500.00 and the loan funds are being spent as follows:

	<u>CDBG</u>	<u>KPWSLF</u>
2002 CDBG Water Line Project	\$ 400,000	\$ 500,000
2002 Water Plant Improvements	-0-	\$1,036,500
2003 CDBG Water Line Project (proposed)	\$ 400,000	<u>\$ 500,000</u>
Total KPWSLF Loan Funds		\$2,036,500

ACKNOWLEDGEMENTS

The help of Don Cawby, City Manager, Mike Gilliland, Director of Utilities and City water maintenance personnel in furnishing information and assistance on this study is respectfully acknowledged.

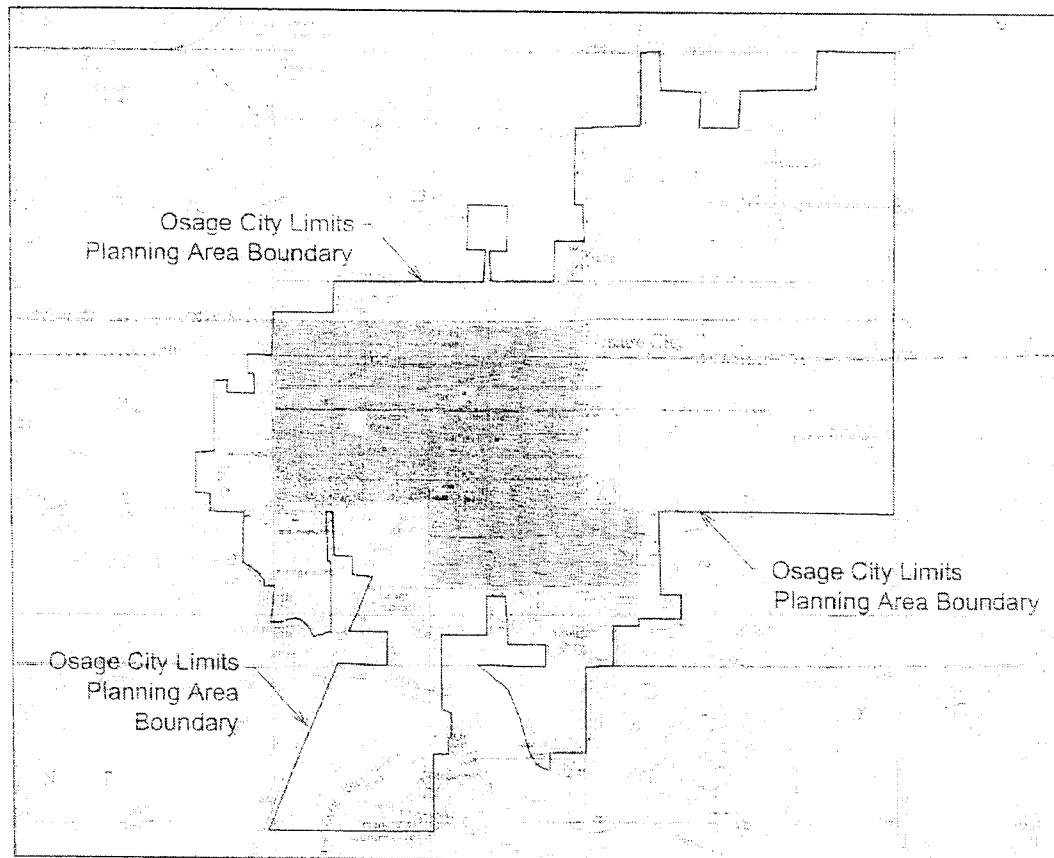
SECTION II CURRENT ENVIRONMENTAL CONDITIONS

GENERAL

Osage City owns and operates their water distribution system and water treatment plant. The water utility serves 1,303 City water customers (2,970 persons) in the planning area and sells water to Rural Water District No. 7 Osage County and the City of Burlingame. The City also owns and operates the sewerage, natural gas and electric systems.

AREA SERVED

The area served by the Osage City, city water distribution system and planning area for this report is shown below:



**Figure II-1
Planning Area Map**

TOPOGRAPHY

Osage City lies in the central part of Osage County and is located approximately 30 miles south of Topeka. Elevations in the planning area range from a high of about 1110 feet M.S.L. in the southeast area to a low of about 1050 feet M.S.L. in the south. The planning area is surrounded by rolling hills which are mostly used for pasture land.

CLIMATE AND PRECIPITATION

The planning area is within the moderate temperature zone and has an average annual rainfall of 34 inches. During the summer, the highest daily temperature seldom rises above 100 degrees for more than a few successive days. During the winter, the lowest temperature seldom falls below zero for more than three or four days. The average annual evaporation for the area is approximately 50 inches.

AIR QUALITY

As in the case for most rural areas in Kansas, air pollution in Osage City is minimal. There are no industries within the planning area which discharge large quantities of pollutants into the air.

AESTHETICS

Osage City is a pleasant small town and presents a pastoral serene view of small community life typical of most Kansas towns. There are no areas within the planning area which might be considered unaesthetic.

HISTORICAL/ARCHAEOLOGY

No known archaeological sites have been identified within the planning area.

FLOOD HAZARD INFORMATION

The planning area is not within the 100-year flood area as determined by the National Flood Insurance Program.

PLANNING PERIOD

The planning period is the time span over which water system needs are forecast and facilities are planned to meet such needs. For this project a 20 year planning period is recommended. Water lines and appurtenances will have a much longer life than the planning period. However, it is not reasonable to use a planning period of 40 to 60 years in the future. Based on a 20 year planning period and estimate that it will be 2003 before the proposed water project is completed, a project design year of 2023 has been selected.

LAND USE

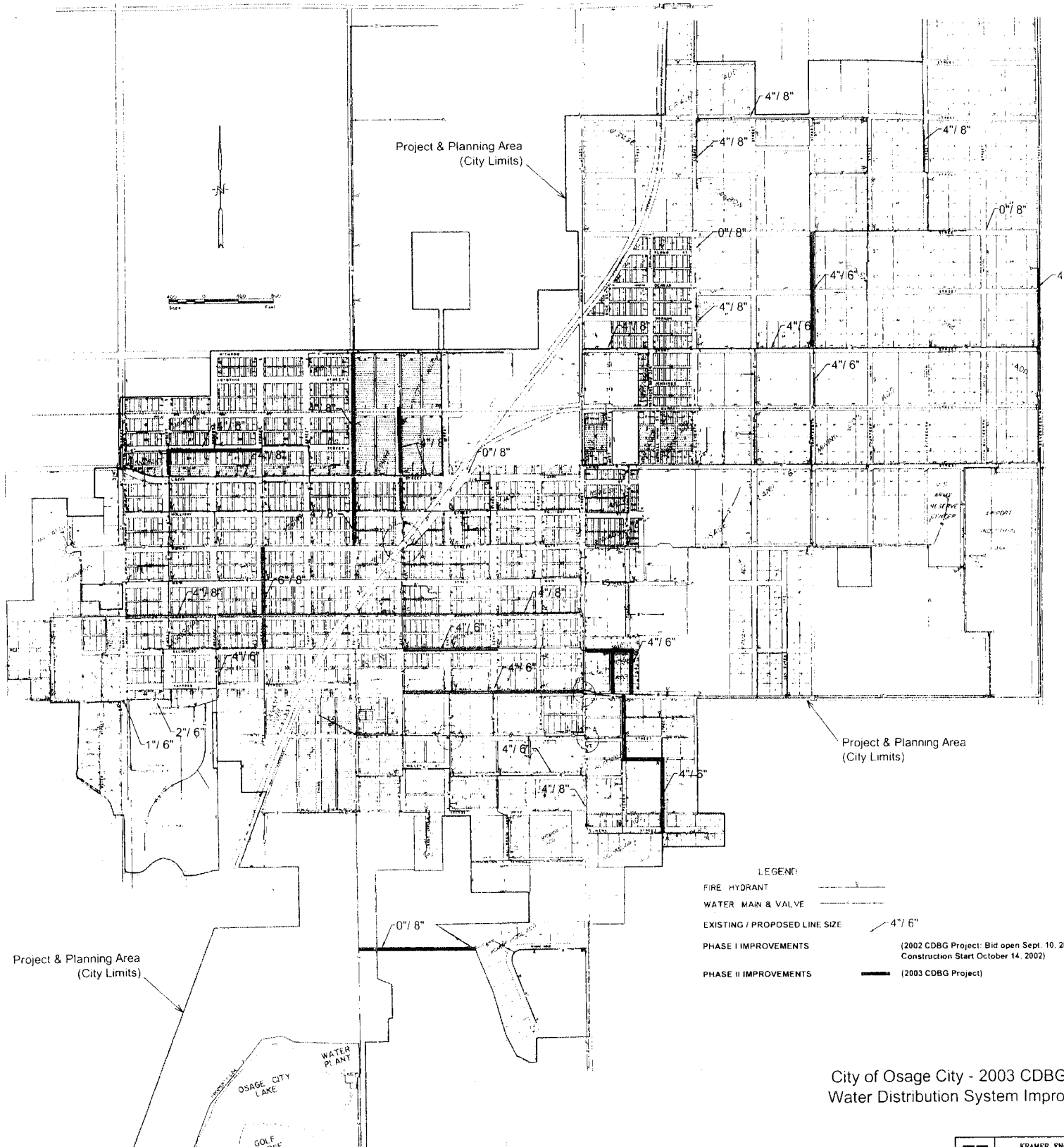
Land use in the project area is for residential homes, small businesses and one manufactured housing plant.

The proposed water system project will not have a significant effect on land use. The system improvements will be designed and located to be compatible with existing land uses. There is no great change in land use projected for the project area during the planning period of 20 years. Therefore, the project will have continuing compatibility of facilities with the community needs over the planning period.

POPULATION PROJECTION

The future population of the area to be served is affected by so many indeterminate factors (housing, employment, utility service, schools, etc.) that the prediction of future growth, regardless of degree of prior study should only be considered as an approximation.

A detailed analysis of population trends for the planning area and reasons for population changes is beyond the scope of this study. In order to project future population for the City of Osage City, information from the Kansas Water Office was utilized as shown in Table II-1 on the following page. Table II-2 shows the projected number of water meters for the City in the project design year 2023.



City of Osage City - 2003 CDBG
Water Distribution System Improvements

TopoZone.com

Target is UTM 15 254042E 4279732N - **OSAGE CITY** quad [Quad Info]

