South Main Watershed Assessment

Introduction

Material presented in the following summary documents current stormwater management and flooding issues for the South Main Watershed. Information presented is based on a review of available information related to current conditions in the drainage basin. No comprehensive analysis of stormwater management and flooding issues in the watershed has been performed in the last 20 years.

Watershed Description

Description and Land Use

The South Main watershed is located in the northern part of the City of Rockford on the east side of the Rock River. The watershed drains approximately 1,200 acres at its mouth. 78% of the watershed is located within the City of Rockford. The watershed is compact and small, with the receiving stream being the Rock River to its east.

Watershed Statistics: South Main	
Total Area:	1,200 ac.
Total Area within City:	936 ac.
% of City within Watershed:	2.4%
Other Stakeholders:	None
No. of Detention Facilities	0
No. of Outfalls	4

The South Main watershed is about 60% developed. The South Main watershed contains a few commercial and industrial parks on the west bank of the Rock River. There is light residential development concentrated in the central and eastern portions of the watershed, but parkland and vacant parcels dominate the western borders. There are also a handful of schools and recreation facilities.

Topography and Soils

The topography of the South Main watershed is that of a relatively flat and compact watershed on the west bank of the Rock River. Ground elevations within the watershed range from about 850 feet NAVD near Montague Road to about 700 feet NAVD near the watershed's boundary with the Rock River.

Soils within the South Main watershed consist primarily of type B soils, with a thin strip of type D soils in the center of the watershed. Type B soils are soils with moderately low runoff potential when thoroughly wet. Water can be transmitted through these soils without

impediment. Type B soils typically have less than 20 percent clay, and between 50 and 90 percent sand with a loamy sand or sandy loam textures. These soils have moderately fine to moderately coarse textures. Type D soils are characterized by properties that restrict water movement through the soil. Type D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clayey textures. They have high runoff potential when thoroughly wet.[20] The predominance of type B soils in the South Main watershed should facilitate infiltration of rainfall in pervious areas, thereby contributing to lower runoff volumes and rates than in basins with less pervious soil types.

Primary Receiving Stream

The Rock River is the receiving stream for the South Main watershed. The watershed is flat and the gentle slope to the River is the direction of runoff flow.

Due to the lack of a receiving stream within the watershed itself, there are no impoundments or gauging stations in South Main.

There is no readily available flow data for the South Main watershed as the watersheds contribution to the Rock River can not be feasibly measured.

Given the character of the watershed, flooding within South Main is primarily caused by pooling due to wet weather events. As shown in Figure SM-1, the floodplain along the Rock River is very small, and along the South Main boundary, it does not enter any developed area.

Records maintained by the Federal Emergency Management Agency (FEMA), indicate that no letters of map revision (LOMRs) have been issued for development projects in the South Main watershed during the past 30 years.

Water Quality and NPDES Discharges

SCORE has not collected water quality data in the South Main watershed.

Table SM-1 provides the NPDES-permitted point sources identified within the watershed using the USEPA's water quality mapping program, BASINS.

Table SM-1

NPDES POINT SOURCES LOCATED WITHIN THE SOUTH MAIN WATERSHED ROCKFORD, ILLINOIS

NPDES Permit #	Facility Name	Receiving Water

[20] Burke, Christopher and Thomas Burke. HERPICC Stormwater Drainage Manual. West Lafayette, Indiana: Purdue Research Foundation, 1994.

IL0059226	Laredo Liquor	Rock River

Runoff from industrial sites is a potential pollutant source for receiving waters. Table SM-2 lists the industrial sites within the South Main watershed.

Table SM-2
INDUSTRIAL SITES LOCATED WITHIN THE SOUTH MAIN WATERSHED
ROCKFORD, ILLINOIS

Name	Street	Land Use Code (LUC)	LUC Description
St. Ambrogio Society	Montague	7992	Clubs & Services Organizations w/Food
Nature Science Middle School	Ogilby Rd.	8210	Educational Facilities – w/o Sp, FC.
Jumpin Jack's Playland	Marchesano Dr.	5000	Wholesalers & Retail Outlets

Existing Drainage Network
Drainage within the South Main watershed occurs through a mix of surface drainage and gravity storm sewers. The western part of the watershed, surface drainage is the primary mode of stormwater conveyance. The northeastern part of the South Main watershed is drained by networks of storm sewers as shown in Figure SM-2.

Figure SM-2 also shows the general location of identified detention basins and storm sewer outfalls within the South Main watershed. The South Main watershed has no identified detention facilities which is expected due to the age of the infrastructure in this watershed. The 4 identified storm sewer outfalls within the watershed are concentrated along the bank of the Rock River.

Available Data Resources

Previous Drainage Studies

A review of available data identified no recent, comprehensive studies of drainage issues within the South Main watershed.

Historic Flow Data
No source of historic flow data has been identified for the South Main watershed.

Historic Water Quality Data
No source of historic water quality data has been identified for the South Main watershed. (pending input from David Pott)

Other
Flood Insurance Study:
Winnebago County and Incorporated Areas, (FEMA, 2006)

Soil Characteristics:
"Soil Survey Geographic (SSURGO) database for Winnebago County, Illinois."
Fort Worth: U.S. Department of Agriculture, Natural Resources Conservation Service, 2007. URL:<http://SoilDataMart.nrcs.usda.gov/>

Drainage Issues

Table SM-3 provides a summary listing of current identified drainage issues and projects within the South Main watershed. The general locations of these issues and projects are shown on Figure SM-1.

There is very little flooding and stormwater management issues in this watershed. If the City receives ponding complaints from the from residents, they respond to the best of their ability. Further evaluation of site-specific stormwater management/flood control improvement needs is required to provide a basis for effective planning, budgeting, and prioritization of potential projects.

Table SM-3
SUMMARY OF STORMWATER/FLOOD CONTROL ISSUES AND PROJECTS
SOUTH MAIN WATERSHED, ROCKFORD, ILLINOIS

		Issue Type				Action			
#	Brief Description of Issue	Over-bank Flooding	Major Surface Flooding	Localized/Nuisance Flooding	Water Quality Impacts	Improvements Completed	Maintenance Required	Future Project	Proposed Project
1	***Springfield Avenue and Beltline Road*** - future development.							•	
2									

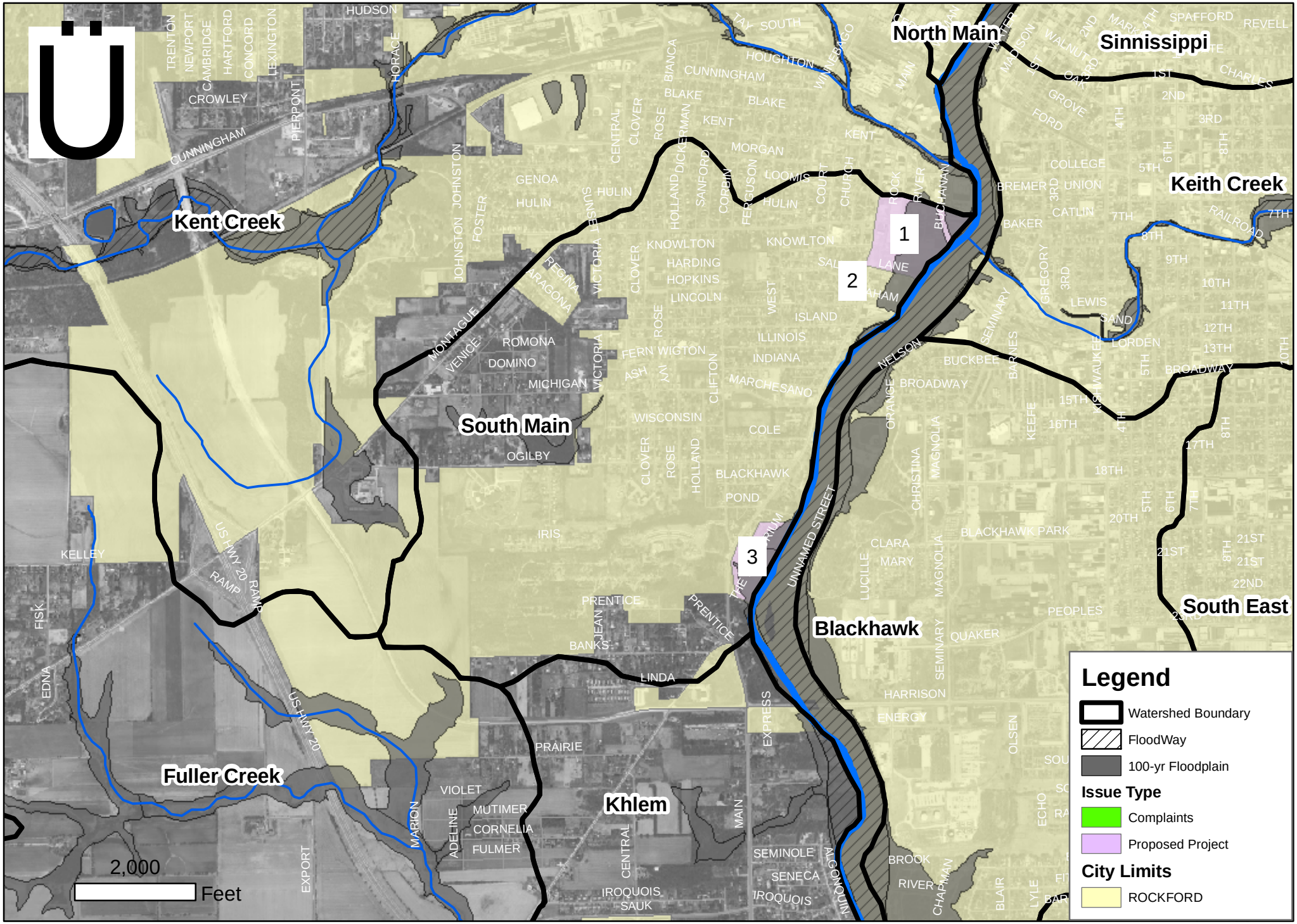

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Figure SM - 1

South Main Watershed Flooding Issues

City of Rockford, Illinois

Autumn 2008

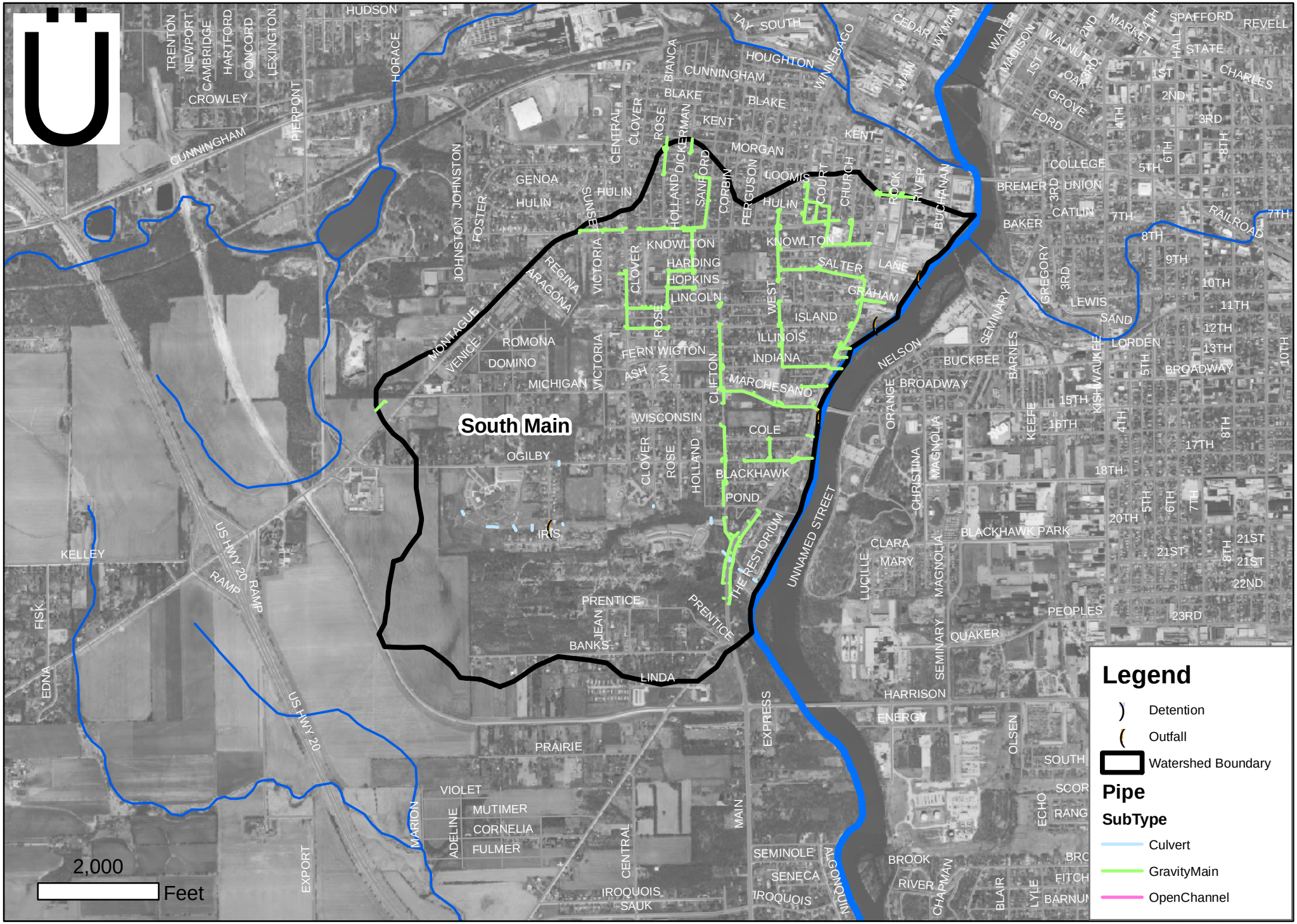

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Figure SM - 2

South Main Outfalls, Detention and Storm Sewer

City of Rockford, Illinois

Current Data as of Autumn 2008