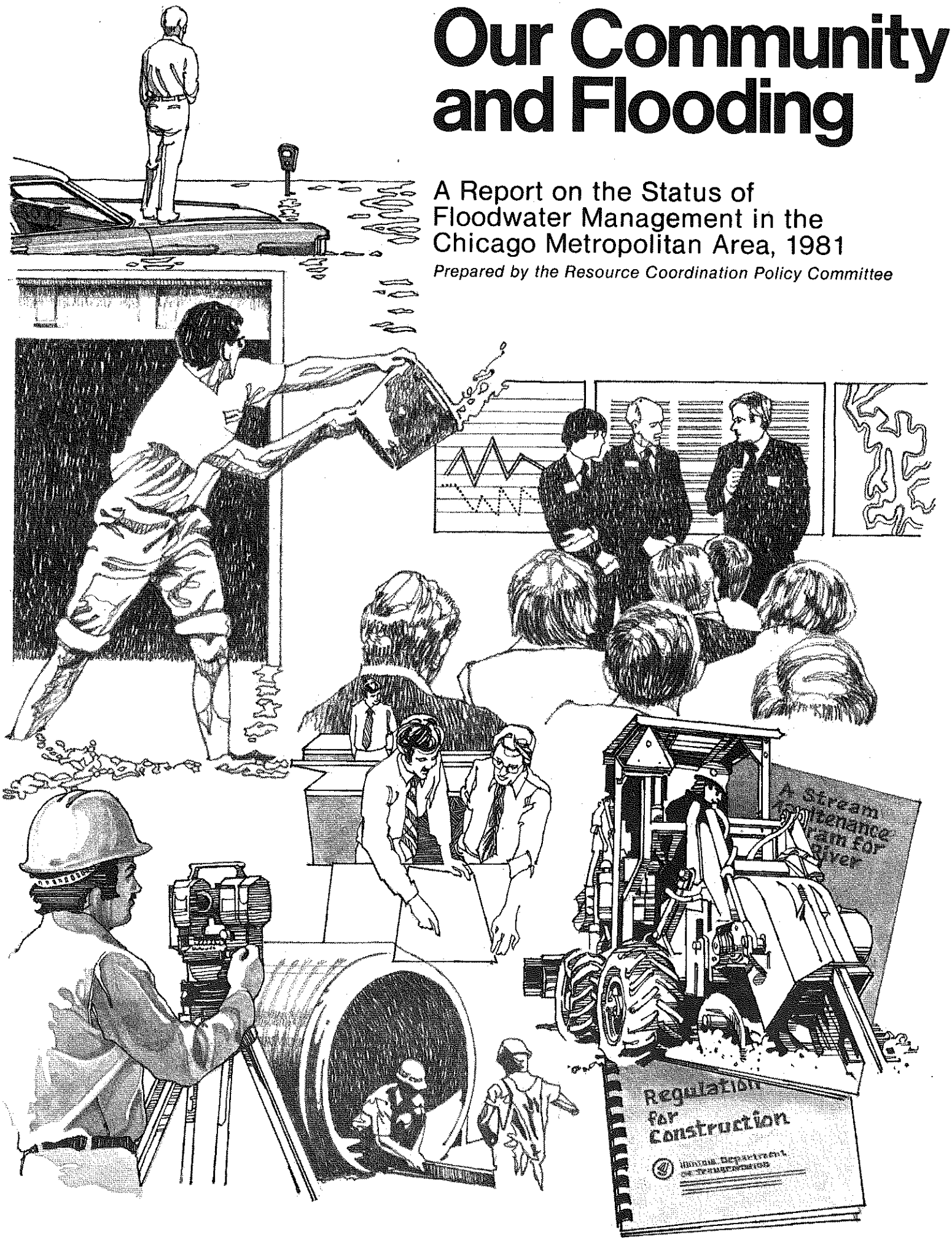
Our Community and Flooding

A Report on the Status of Floodwater Management in the Chicago Metropolitan Area, 1981

Prepared by the Resource Coordination Policy Committee



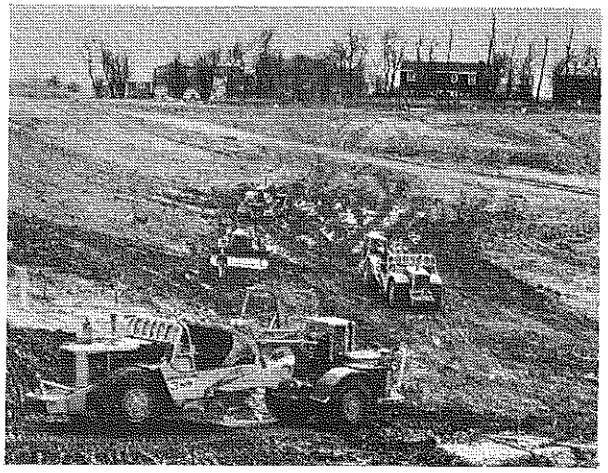
Preface

We have a problem in the Chicago Metropolitan Area — flooding.

For years, we have covered the earth with pavement and buildings. Water originally held by the earth was directed by our technical skills to streams which were never designed by nature to carry such volumes. The water directed so cleverly to these outlets rushed over the stream banks and caused the very problem that our technology was supposed to stop — flooding.

In recent years, our community leaders and organizations have worked together to stop existing flood damages and prevent future flood damages from occurring. The original "Our Community and Flooding" prepared in 1975 summarized the watershed plans developed as part of this collective effort.

The purpose of this report is to measure our progress to date and to summarize what remains to be done. Since the rains will continue to come and our communities will continue to grow, the progress of our floodwater management plans is essential to assure that we have communities safe and secure from the hazards of flooding.



The Resource Coordination Policy Committee

The Resource Coordination Policy Committee is composed of floodwater management and related agencies working together to solve our flooding problems. It receives direction and guidance from the Chicago Metro Area Council of Watershed Steering Committees which represents communities and local leaders of each watershed. The agencies include:

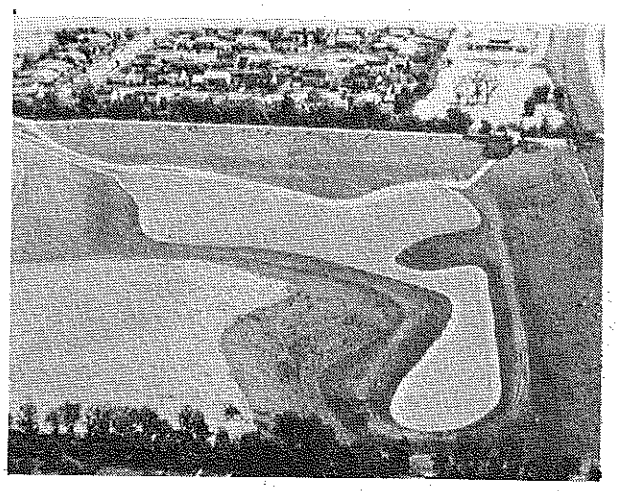
Soil and Water Conservation Districts of North Cook, Lake, DuPage, Kane, South Cook and Will Counties

Illinois Division of Water Resources

Metropolitan Sanitary District of Greater Chicago

U.S. Department of Agriculture Soil Conservation Service

Table of Contents



How Our Flood Problems Developed

Flooding and related problems have been a part of the history of the Chicago area since its earliest days. History records that Marquette and Joliet who first explored this area in 1673 were forced to move their camp because of flooding.

The Chicago Metropolitan Area's location on the southwest shore of Lake Michigan has helped to make it a major national transportation and business center. But the geological features of this location also cause major flood problems. Glaciation left our area quite flat, particularly the area nearest Lake Michigan which was covered by Glacial Lake Chicago. As a result, stream systems are poorly developed. Undrained areas in the form of wetlands are common and floodplains vary greatly in width. The flatness of our region often means that floodwaters cover large areas. Watersheds draining the area include the Chicago River, North Branch Chicago River, Des Plaines River, Little Calumet River in Illinois, Calumet Sag Channel, Poplar Creek, Salt Creek, DuPage River and Fox River in Illinois.

The rapid population growth since the 1950's caused many municipalities to urbanize areas that are natural floodplains, i.e. those areas next to our streams that flood when their banks are overflowed. Urbanization of these areas at that time was considered sound economic and political reasoning. It was orderly growth within areas containing public services and utilities.

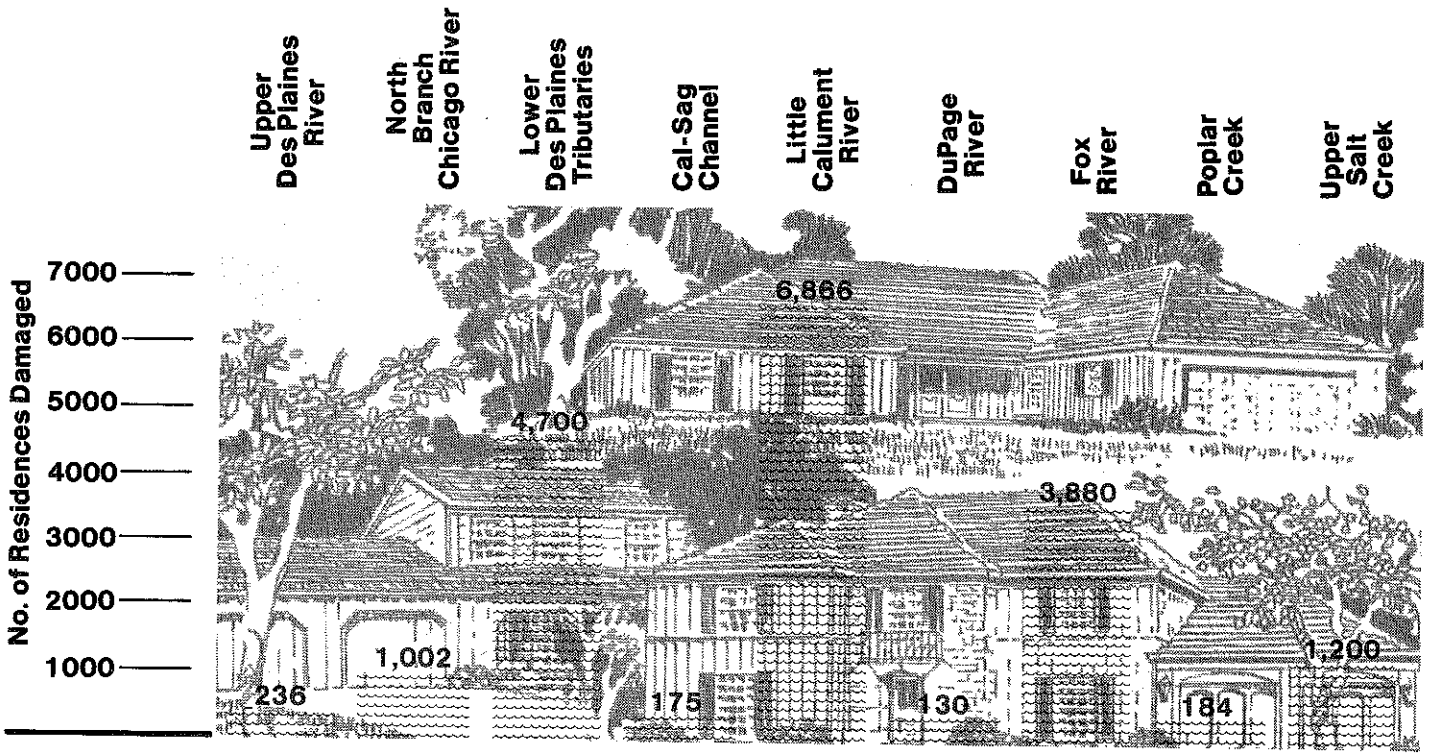
The result of this urbanization today is over $12.5 million in average annual floodwater damages affecting 200 communities. It is estimated that a major flood occurrence damages some 17,210 residential buildings and 545 commercial buildings. Also affected are 10 major transportation arteries and 43 secondary traffic routes. Direct damage to highways and bridges is not usually large but major economic losses do occur in the form of associated damages when traffic is disrupted and homes and businesses become inaccesible due to floodwaters.

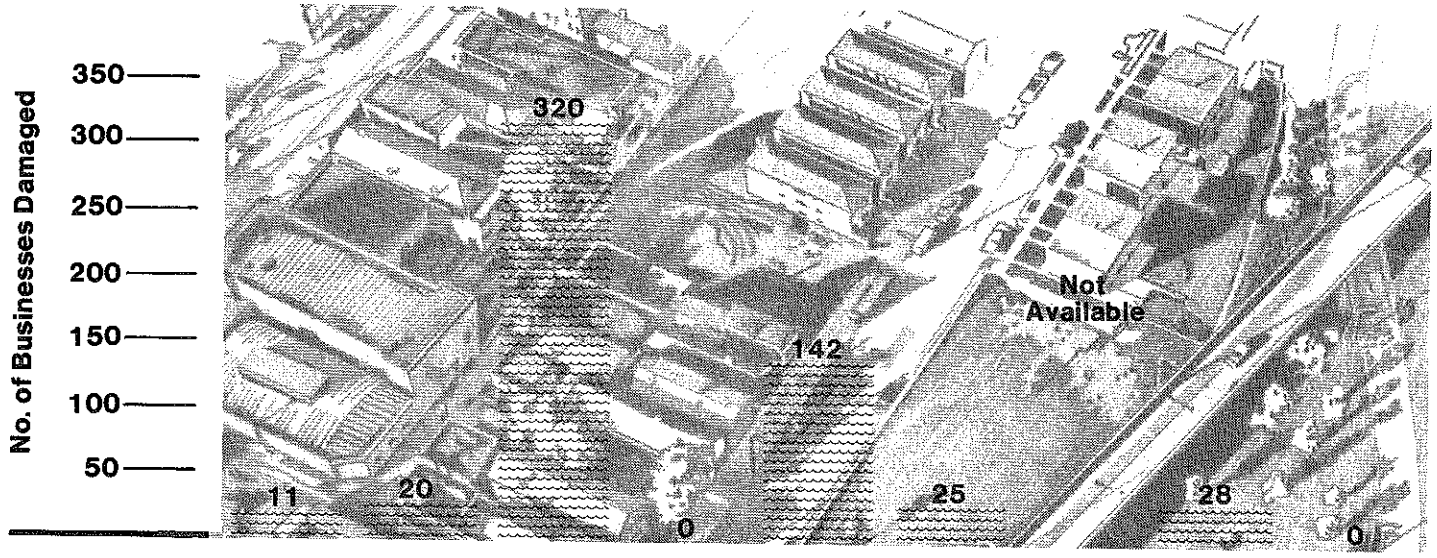
Many important physical factors serve to increase the frequency and impact of our flooding problem. Poor management of our natural resources is one of these factors. Erosion from areas under development produces sediment which obstructs drainage facilities and reduces the capacity of our streams to convey water. Development of wetland areas also adds to our problem. The natural floodwater storage of these wetlands is lost through filling and the development often drains into storm sewers which speed the runoff to downstream floodplains. The practice of filling floodplains to insure that planned improvements are above past record flood depths is another factor. Filling causes the storm runoff to find other areas to flood, often to the distress of neighbors.

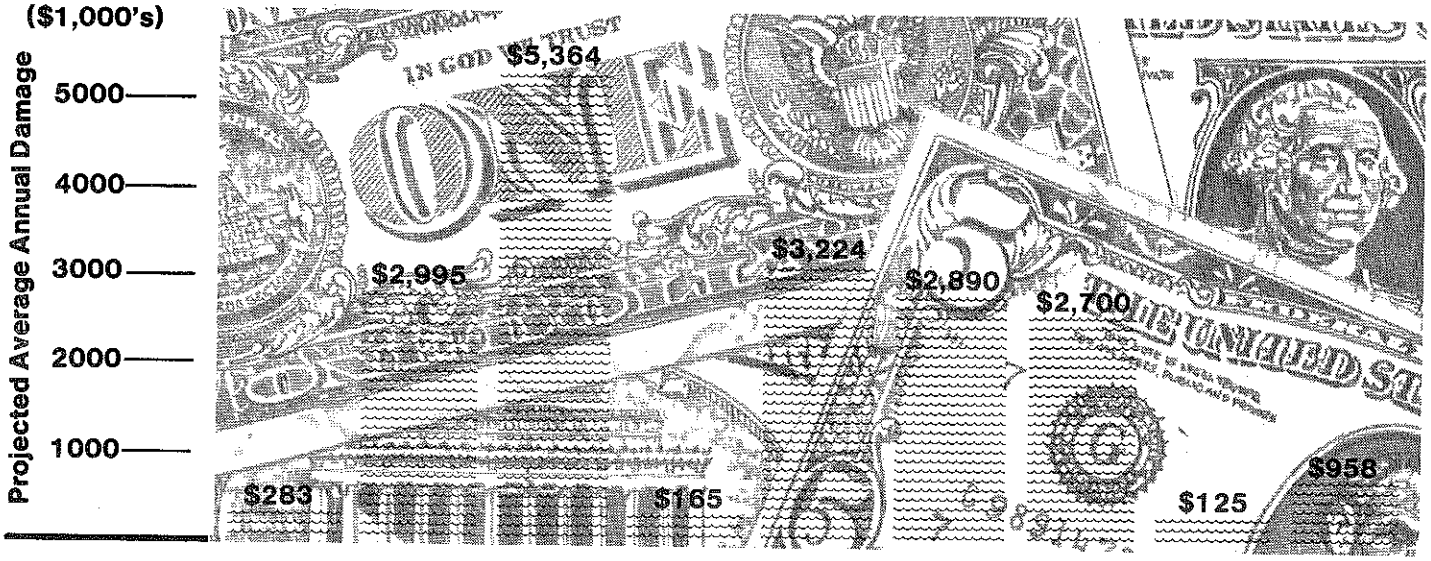
In addition, alterations to stream channels have contributed to the flooding problem. While stream modification may provide flood protection to adjacent areas, the downstream effects have commonly been detrimental. Inadequate bridge openings have also produced adverse effects by restricting the flow of water and causing it to back up. Flooding also occurs because of poor stream maintenance. Heavy vegetation growth and debris accumulations reduce the ability of streams to convey water. Poorly planned development in the floodway and flood fringe areas of a floodplain also creates additional problems.

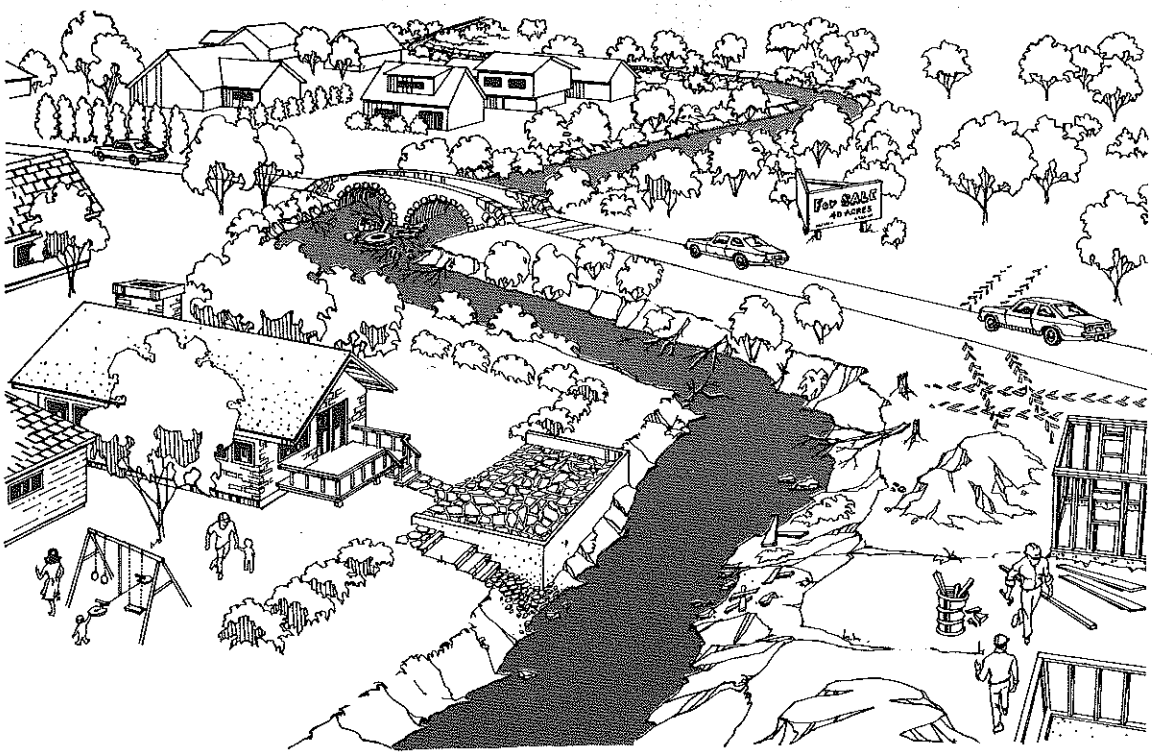
The area-wide complex flood problem cannot be solved by one agency alone. The solution lies in a coordinated effort throughout the Chicago Metropolitan Area.

The Scope and Severity of Flood Damages

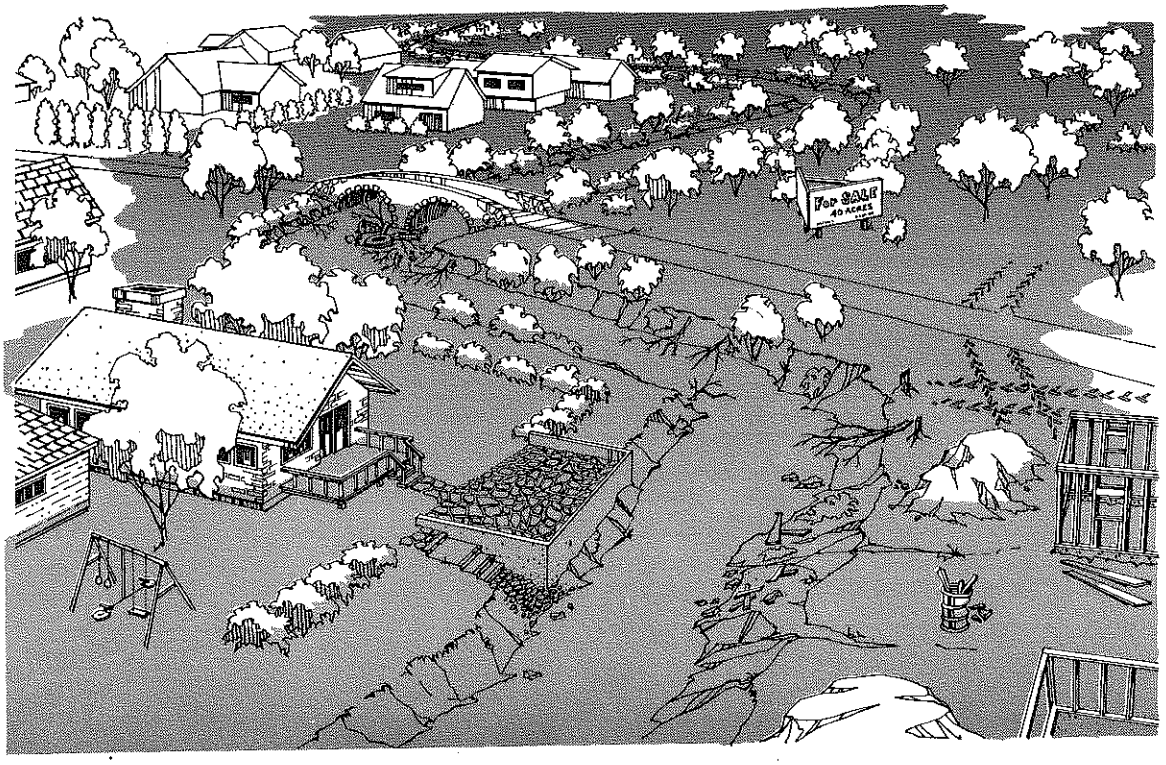




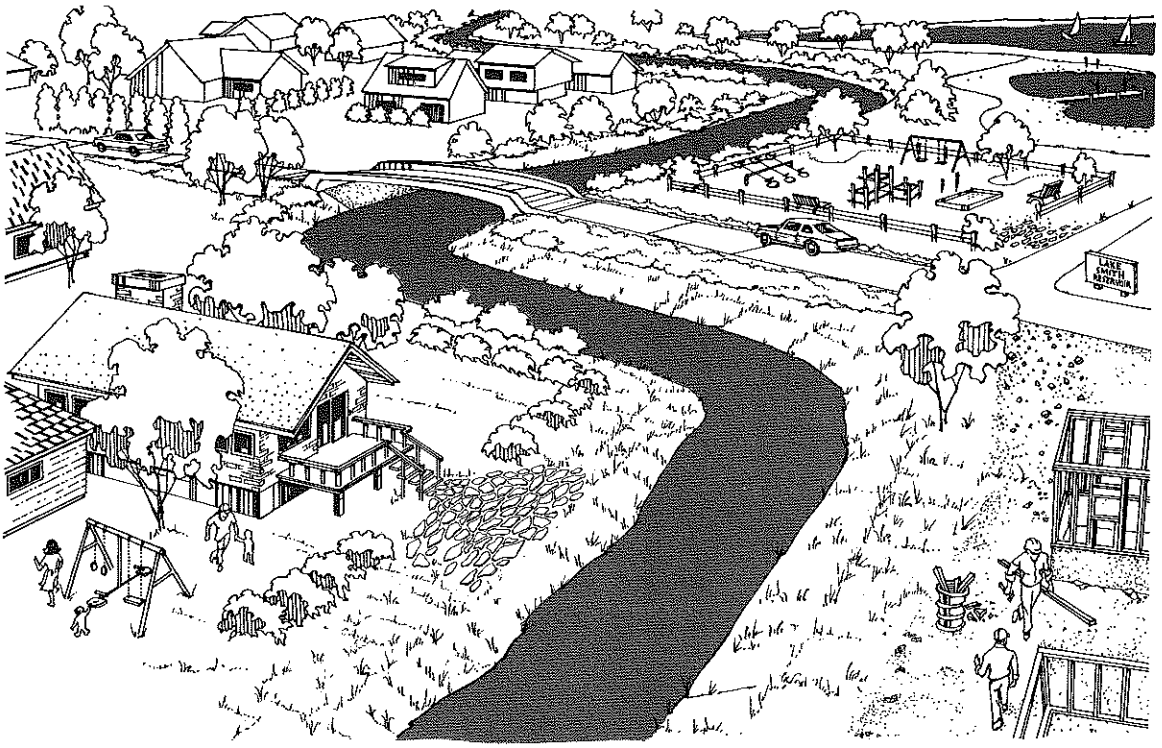




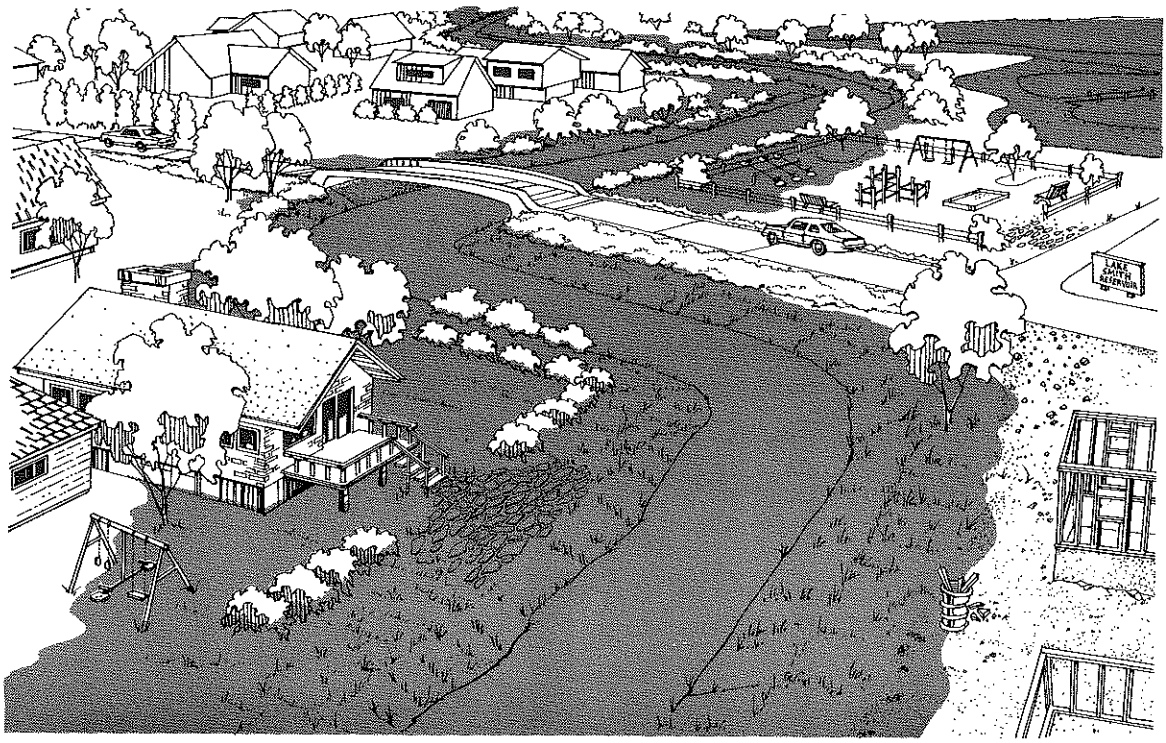
1. Floodwater management is achieved by learning what impacts a flood will have, what causes those impacts and how they can be minimized, if not eliminated. The scene above typifies the kinds of things that worsen a flood's damaging effects: projection into the stream; erosion and sedimentation from developing areas; poor maintenance; debris; improper use of land in the floodplain.



2. When a flood does occur, poor stream maintenance, construction, planning and development can result in considerable property damage and other negative impact.

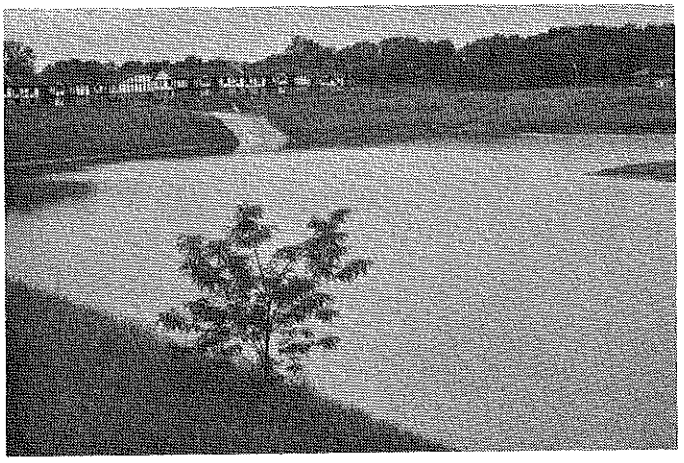


3. The same scene is shown here, but with some alterations and additions: a house can be floodproofed by raising the floor level above flood elevation; the absence of a projection into the stream; a well maintained construction site, stream and stream bank; an elevated roadway and new bridge; a multi-purpose flood control reservoir.

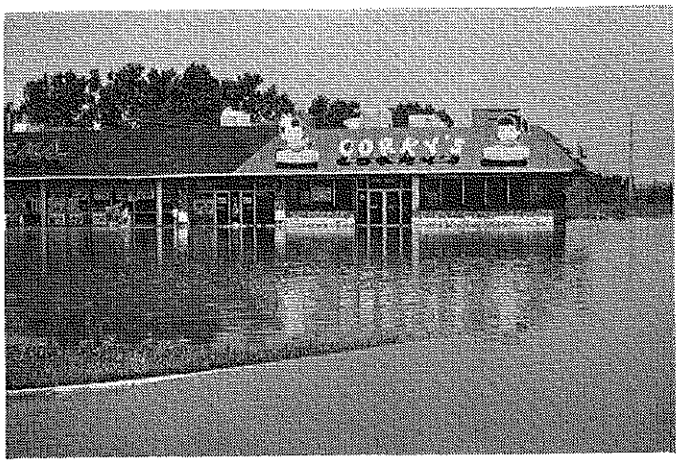


4. Again, the flood occurs. It's important to understand that floodwater management does not stop flooding. However, by comparison to the scene on the left, it does reduce damage significantly.

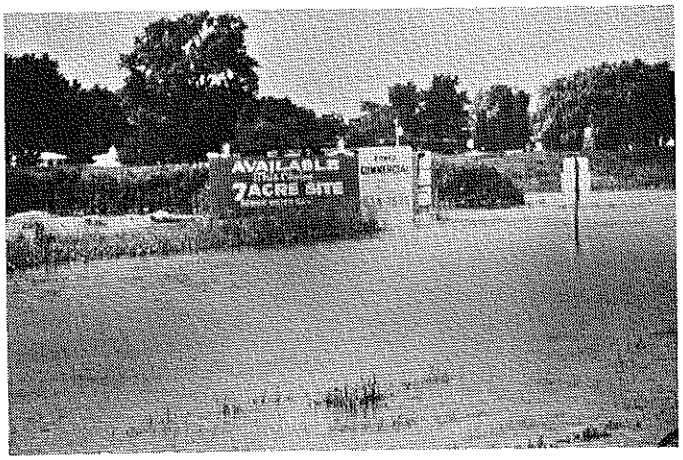
Solutions to the Problem

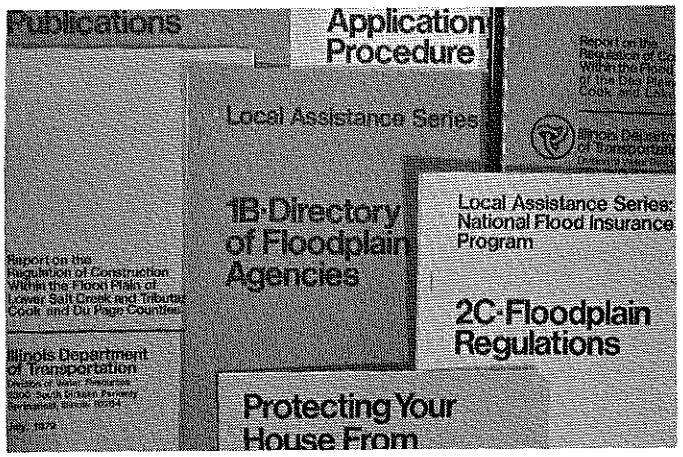


Widespread residential flood damages (left) can be reduced or eliminated by structural measures such as floodwater storage reservoirs (right).

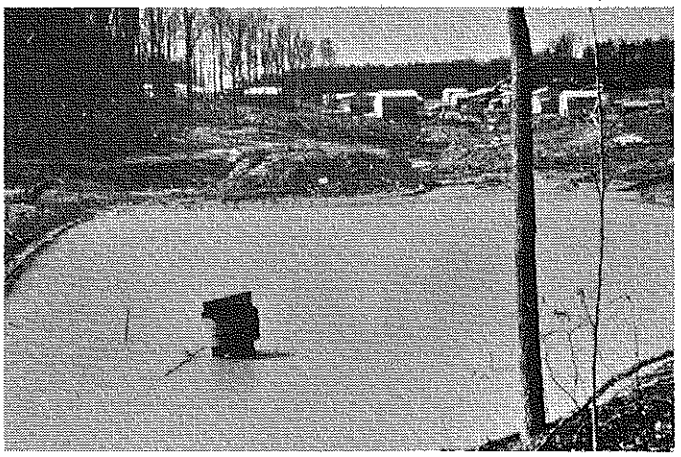


Flood damages to business and industry (left) affect the economic well-being of an entire community. Channel improvements (right) can significantly reduce those damages.

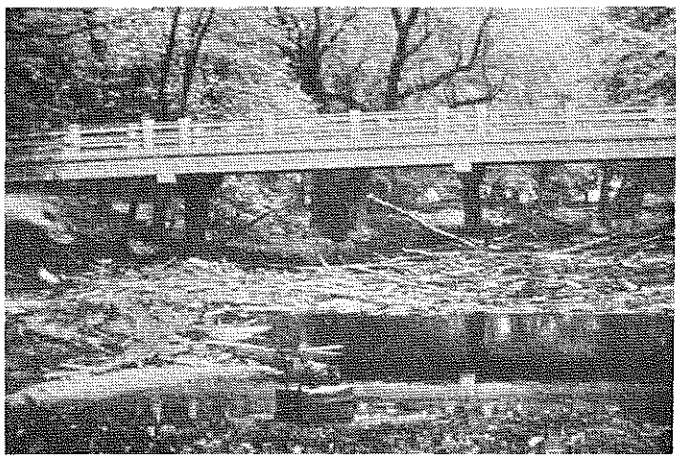


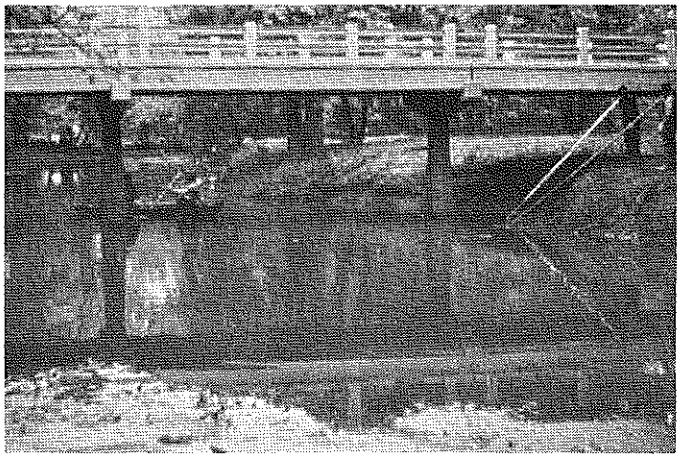


Uncontrolled development in flood-prone areas (left) often causes extensive economic losses affecting an entire community. Non-structural, regulatory actions (right) can greatly reduce these effects.

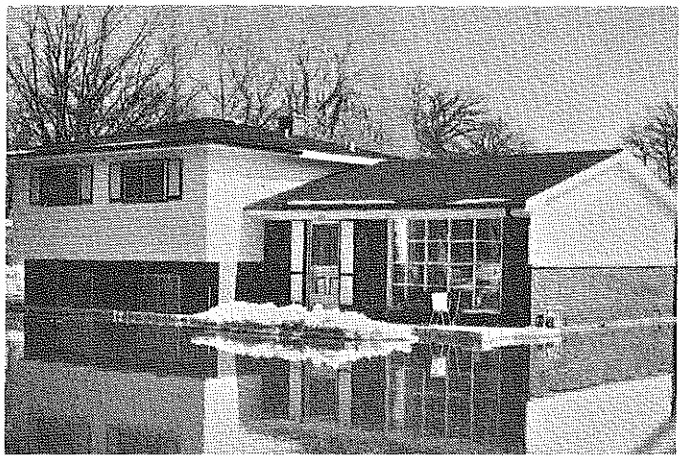


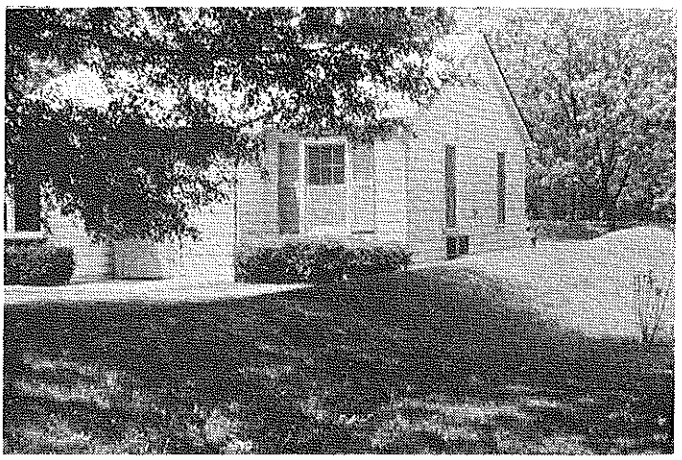
Besides the loss of valuable top-soil, lack of proper erosion protection measures during and after any construction work will produce sediment (left), a major factor in increased flood levels. Techniques like the sediment trap shown (right) will reduce or eliminate this unnecessary condition.





Man-made and natural debris (left) decreases the ability of a stream to carry water, especially during a flood. Proper maintenance (right) insures efficient floodwater conveyance.





Moving from a flood-prone area is not economically feasible for many who experience periodic flood damage (left). Floodproofing techniques, such as the berm shown (right) can provide protection from floodwaters

Existing Services and Programs

Many local, state and federal agencies are working together to solve flooding problems in the Chicago Metropolitan area.

Efforts have been made to coordinate activities when appropriate to take advantage of the economies of regional planning. The Chicago Metropolitan Area River Basin Study is an example of such a planning effort.

The study was begun in 1971 when the Metropolitan Sanitary District entered into a cooperative agreement with the Soil Conservation Service to prepare River Basin Plans under authority of Section 6 of Public Law 566, 83rd Congress, as amended - the Watershed Protection and Flood Prevention Act.

Concerned citizens joined local, state and federal agencies to investigate flooding problems in the Des Plaines, North Branch Chicago River, Little Calumet, Poplar Creek, Calumet-Sag and Salt Creek Watersheds. Working under federal guidelines, every aspect of the flooding problem was investigated.

The primary goal of the study was to develop comprehensive plans to reduce existing floodwater damages. The problems and needs in each of the watersheds were considered. As a result, programs and projects were developed which are now being implemented.

Similar studies are now being conducted by the Corps of Engineers in the Fox River and DuPage River Watersheds.

USDA Programs (Soil Conservation Service)

The Watershed Protection and Flood Prevention Act (P.L. 566) authorizes the Soil Conservation Service (SCS) to cooperate with local organizations to carry out, maintain, and operate works of improvement for flood prevention, multiple purpose water resource development, and protection of soil resources. Under this authority, floodwater management plans for the six watersheds referenced earlier in the discussion have been developed in cooperation with agencies and steering committees in each watershed. Steering committees are groups of concerned citizens who serve on a voluntary basis. They represent the social, economic, and environmental setting prevalent in their area and have joined together to seek solutions to the flooding problems that confront their communities.

The following goals and assumptions were universally adopted by these committees during preparation of the floodwater management plans:

1. Protect against the flood which occurs on the average of once in 100 years (100 year frequency)
2. Project flooding conditions with urbanization at the year 2000.
3. Emphasize floodwater retention.
4. Limit analysis to flood damages associated with overbank flooding.
5. Assume that the Metropolitan Sanitary District's Tunnel and Reservoir Plan for the combined sewer areas is in place.
6. Assume that flood control measures which have been authorized and funded are in place.

The final plans developed are a combination of structural and non-structural measures to correct existing flood problems and prevent future problems from occurring. They include, reservoirs, channel improvements, dikes, land protection floodplain regulations, channel maintenance programs, floodproofing and wetland and open space acquisition.

Other SCS Programs

The Soil Conservation Service (SCS) provides technical assistance through Soil and Water Conservation Districts to individual landowners, groups of landowners and communities in programs involving soil, water and related natural resource needs. Sumarized, these programs are:

URBAN SOIL EROSION AND SEDIMENTATION CONTROL PROGRAM: Assists governmental units in developing and implementing soil erosion and sedimentation control programs in urbanizing areas. This includes training and assistance in developing soil erosion and sedimentation control plans and on-site help to communities, developers and consultants.

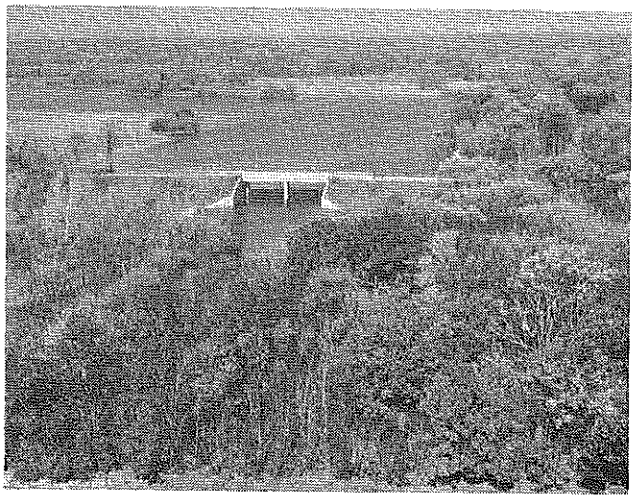
SOIL SURVEYS: The soil survey provides information about soils and their limitation and potential for housing, recreation, septic filter fields, agriculture and many other uses.

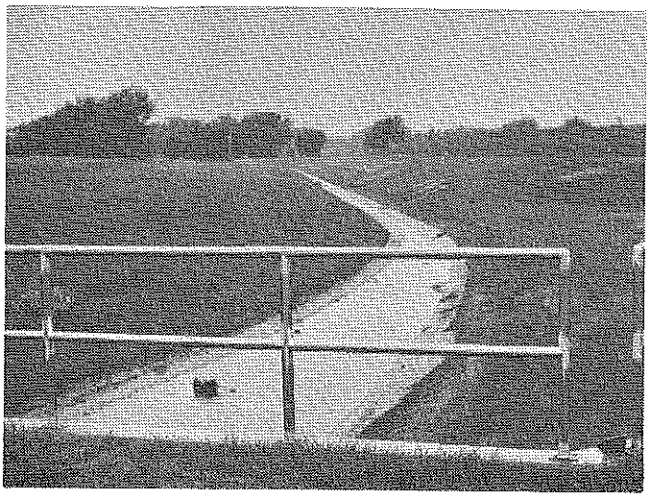
ASSISTANCE TO RURAL LAND OWNERS AND OPERATORS: SCS helps farm owners and operators in planning resource management systems and applying conservation practices to the land. These practices include conservation tillage, contour farming, terraces, structures, grass waterways, pasture planting and management, and woodland planting and management.

Other Federal Programs

The U.S. Army Corps of Engineers, through a series of River and Harbor and Flood Control Acts, has authority to plan and construct major reservoirs and local protection measures for flood control and to improve navigation.

In March 1975, the Corps initiated a study of the Chicago-South End of Lake Michigan Study Area to assess overbank flooding and surface ponding in the area drained by the Des Plaines River and its tributaries and the area tributary to Lake Michigan. The study area includes the Chicago Metropolitan Area River Basin and DuPage and Fox Rivers. The Corps is giving the joint SCS-Corps study areas lowest priority to avoid duplication of planning efforts.





The 1976 Water Resources Development Act authorized a Phase I General Design Memorandum (GDM) Study for the North Branch Watershed to be performed by the Corps of Engineers. The study is now investigating the main features of the Plan prepared by the Soil Conservation Service in October 1974. The Phase I GDM report will contain an evaluation of the federal interest in, and the feasibility of, constructing the reservoirs identified in the Plan. Work on the Phase I GDM should be completed in fiscal year 1981.

A survey report for the Little Calumet River in Indiana was completed in December 1973. The Water Resources Development Act of 1976 authorized a Phase I advanced engineering design study. Congress directed the Corps to determine the feasibility of implementing a flood damage reduction, outdoor recreation and recreation navigation project along the Little Calumet River in Indiana. The Phase I study is now analyzing eight alternative plans for flood damage reduction. The study is expected to be completed in the fall of 1982.

The Corps, with the Metropolitan Sanitary District of Greater Chicago as a local sponsor, has for a number of years conducted a clean-up program on the North Branch and Little Calumet Rivers. Debris, trash and vegetation are removed from designated areas each year. Cost sharing has been 75 percent federal and 25 percent local.

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 created a flood insurance program administered by the Flood Insurance Administration of the Federal Emergency Management Agency.

The 1968 Act made federally subsidized insurance available to citizens in communities that adopt regulations controlling floodplain development.

The 1973 Act makes flood insurance mandatory as a condition for federally related financial assistance to communities or individuals acquiring or refinancing property or building within the flood hazard area as defined by the program established in 1968.

Federal agencies provide assistance following flood disasters in the form of grants, direct assistance or low interest loans. Participation in the flood insurance program by communities with identified flood hazards assures continued flood relief assistance.

State of Illinois, Department of Transportation Division of Water Resources Flood Control Planning

The Flood Control Act of July 1945, Ill. Rev. Stat., Ch. 19, Par. 12C, a-h, gives the Division of Water Resources legal authority to participate in the improvement of the rivers of the State for the purpose of regulating and controlling flood and low water flows. Criteria followed by the Division relating to flood control planning includes:

1. Assurance that most severely damaged areas receive priority consideration and assistance from State and federal sources.
2. State water resource projects be designed to maximize economic efficiency at minimal environmental impact.
3. State expenditures result in the maximum of benefits for the least possible cost.
4. Local interest and investment of funds be required as evidence of involvement in any project.

The Division of Water Resources in cooperation with local government, has provided over 2000 acre feet of floodwater storage in eight reservoirs, as well as improved channels at numerous locations throughout the metropolitan area.

The Division participates in federal programs within the legal authority of State Statutes. The Division is an active sponsor, along with other regional and local agencies, of floodwater management plans developed with SCS assistance. Responsibilities include land acquisition needed for the structural measures and implementation of various non-structural programs.

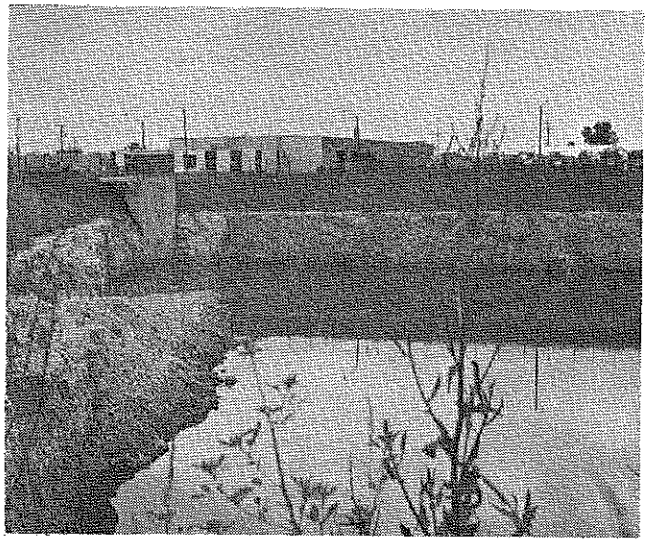
Channel Maintenance (Stream Preservation) Program

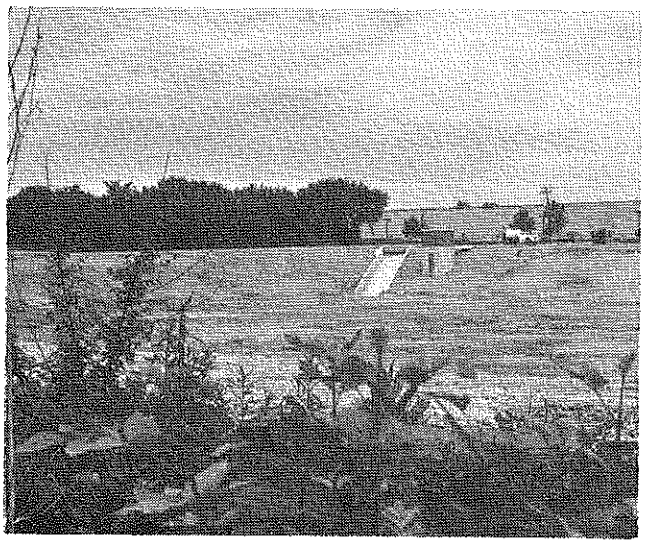
The Division has assumed responsibility for the development of a channel maintenance program as a part of the non-structural program of the Chicago Metropolitan River Basin Plans. The program, now titled "Stream Preservation" is currently being prepared with completion scheduled for late 1981.

It will include the following goals and objectives:

1. Keep debris, sediment and unwanted vegetation out of the rivers and streams.
2. Safe conveyance of floodwater through each community.
3. Assure that flood control structural measures will perform as planned by maintaining unobstructed inflows and outflows.
4. Provide for annual inspection and maintenance of the key rivers and streams in each watershed.
5. Encourage each community to assume responsibility for the stream portion within its jurisdiction.
6. Provide assistance and advice to communities, when needed, by the Division and other regional agencies.

It is expected that the program will be implemented and initially coordinated through each respective watershed steering committee.





State Floodplain Regulations

As an important part of a non-structural program to prevent future flood damages from occurring, the State of Illinois through the Division is implementing floodplain regulations in the Chicago Metropolitan River Basin as follows:

1. Floodplain areas are being divided into "floodways", which are those portions of the floodplain required to store and convey water, and "floodfringe" areas which are areas of the floodplain outside the floodway.
2. A permit is required to construct within the designated floodplain area.
3. Construction is prohibited that significantly raises the stage or velocity of the 100 year projected flood in the floodway.

Floodproofing and Flood Insurance Programs

The Division's Local Floodplain Programs Section is the State Coordinating Agency for the National Flood Insurance Program. This section provides advice and information concerning the flood insurance program as well as technical assistance for floodproofing.

Metropolitan Sanitary District of Greater Chicago

The first modification of the natural drainage system in the Chicago Metropolitan area was done by the Metropolitan Sanitary District in the late 1880's. A series of canals were constructed to reverse the flow of the Chicago River and carry waste away from Lake Michigan.

The existing canal systems (Sanitary and Ship Canal, North Shore Channel, and Calumet-Sag Channel) provide a substantial volume of flood control storage. The water level in the waterways can be lowered in anticipation of a storm to provide bank storage of up to 4600 acre-feet of additional capacity above normal operating water levels.

Flood Control Program

While the Metropolitan Sanitary District of Greater Chicago does not have a specific statutory responsibility in the area of flood control, its involvement and expertise in the areas of water pollution control and drainage has lead the Sanitary District to assume a flood control leadership role in the metropolitan area.

By the mid-1960's, the Sanitary District was involved in the design and construction of many flood control storage reservoirs and stream improvement facilities. Melvina Ditch Retention Reservoir, completed early in 1967, was the first reservoir constructed. To date, 17 reservoirs, ranging in capacity from 24 to 850 acre-feet of stormwater detention, have been completed in the Chicago Metropolitan Area providing relief to thousands of people. All of the reservoirs designed by the Sanitary District will accommodate the largest storm expected to occur in any span of a hundred years.

The maintenance and operation responsibility of approximately one-half of the existing reservoirs has been fully undertaken by the local municipality, while in the remaining reservoirs, the Sanitary District shares this responsibility with a local public entity.

The Sanitary District has sought Federal, State and local participation in its flood control efforts. Today, the Sanitary District is one of the principal sponsors of the floodwater management plans developed by the Soil Conservation Service. These plans address flood control on a regional basis.

The Sanitary District, as a local sponsor of the SCS watershed projects, is generally responsible for the acquisition of land rights. Since the inception of this program, the Sanitary District has expended $8,410,500 in land rights acquisition for five reservoirs (Structures 2, 3, 4, 5, and 6) in the Upper Salt Creek Watershed, and $5,131,520 for three reservoirs (Structures 32, 53, and 143) in the Little Calumet River Watershed.

In 1974, the Sanitary District adopted the "Flood Control Program Guidelines" (amended January 1981) which established certain criteria for the Sanitary District's participation in proposed local flood control reservoir projects (projects not addressed in the regional SCS program). These criteria included such items as the requirement for a local sponsor to co-share the costs of reservoir implementaton, a requirement that the proposed reservoir be of at least 100 acre-feet capacity, that the flooding problem be of long standing, and that the project have a favorable benefit/cost ratio. The January 1981 amendment allows for a "Strategic Planning Study for Flood Control" to be conducted by the Illinois Division of Water Resources. This State study is required for possible State funding of the project and will be used to define a cost effective project. The cost of a State study is to be borne equally by the local sponsor and the Sanitary District. The Flood Control Program Guidelines ensure that public funds are expended only in situations where serious flooding problems exist and adequate justification of expenditures is made.

Sewer Permit Programs

Since 1972, detention of stormwater runoff has been a requirement of the sewer permits within the service area of the Metropolitan Sanitary District. This area includes most of Cook County. Lake and DuPage Counties have also developed similar ordinances based on the MSDGC regulations.

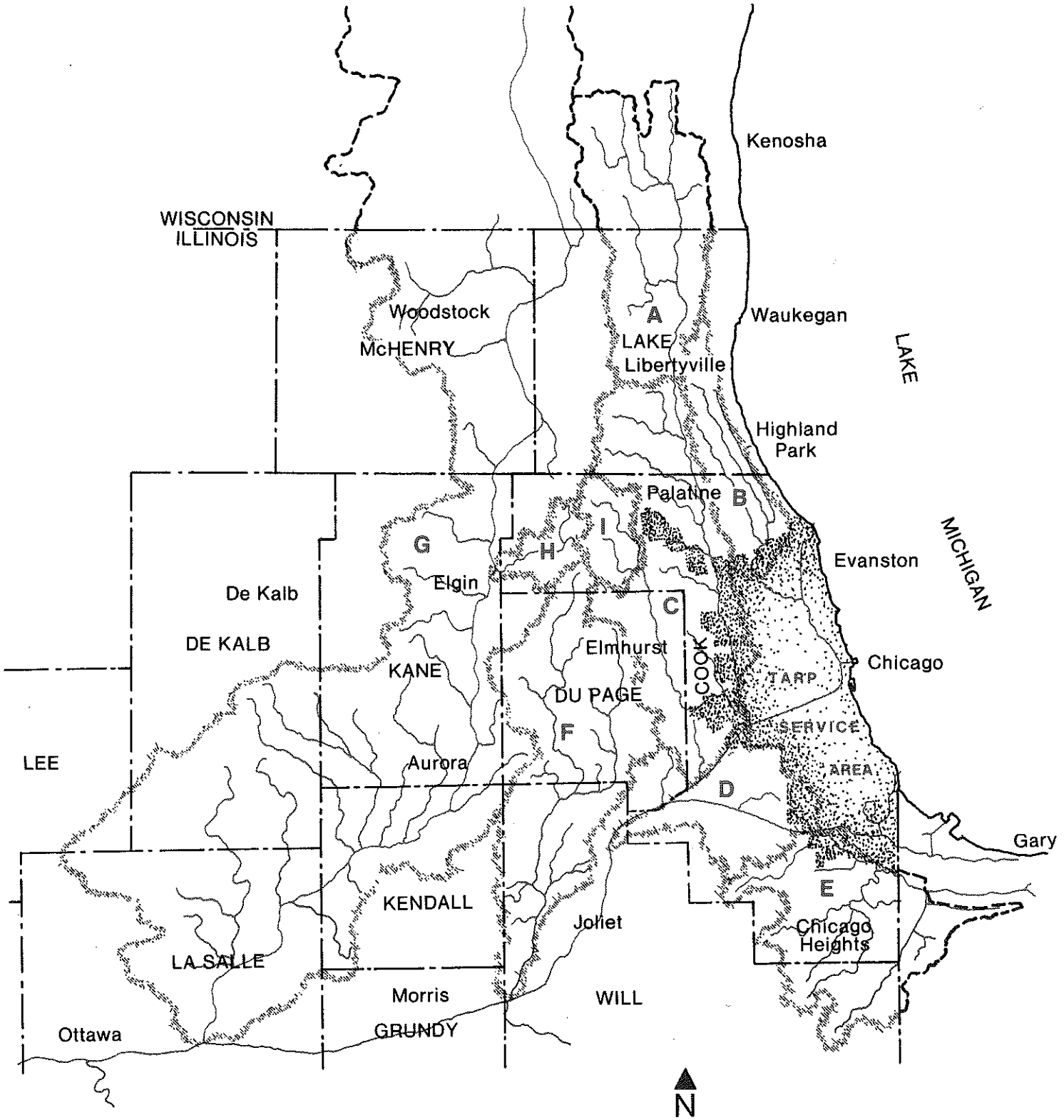
The intent of the regulations is to encourage local governments and developers to jointly provide detention storage. This eliminates excessive runoff during heavy storm periods and promotes comprehensive community wide programs for flood control. The MSDGC ordinance requires that the release rate of stormwater runoff from all developements of a certain size not exceed stormwater runoff from the area in its natural undeveloped stage.

Tunnel and Reservoir Plan (TARP)

The Chicago Metropolitan area has two separate methods for collecting sewage. Flood problems in areas serviced by these two systems must be resolved differently. In all areas except the central basin, sewage and storm water are collected separately. These areas are commonly called separate sewered areas. Surface flood retention reservoirs, mentioned previously, are provided only in separate sewered areas. In the central basin, sewage and stormwater are collected in the same sewer and the areas served are called "combined sewer" areas. Combined sewer areas comprise 375 square miles of the total 872 square mile area under the jurisdiction of the Sanitary District. Flood and pollution problems in these areas will be served by the Tunnel and Reservoir Plan (TARP). The TARP service area includes the City of Chicago and 52 suburban municipalities.

TARP consists of two phases. Phase I of the Plan is primarily a water pollution control project. Phase II is associated primarily with urban flood control.

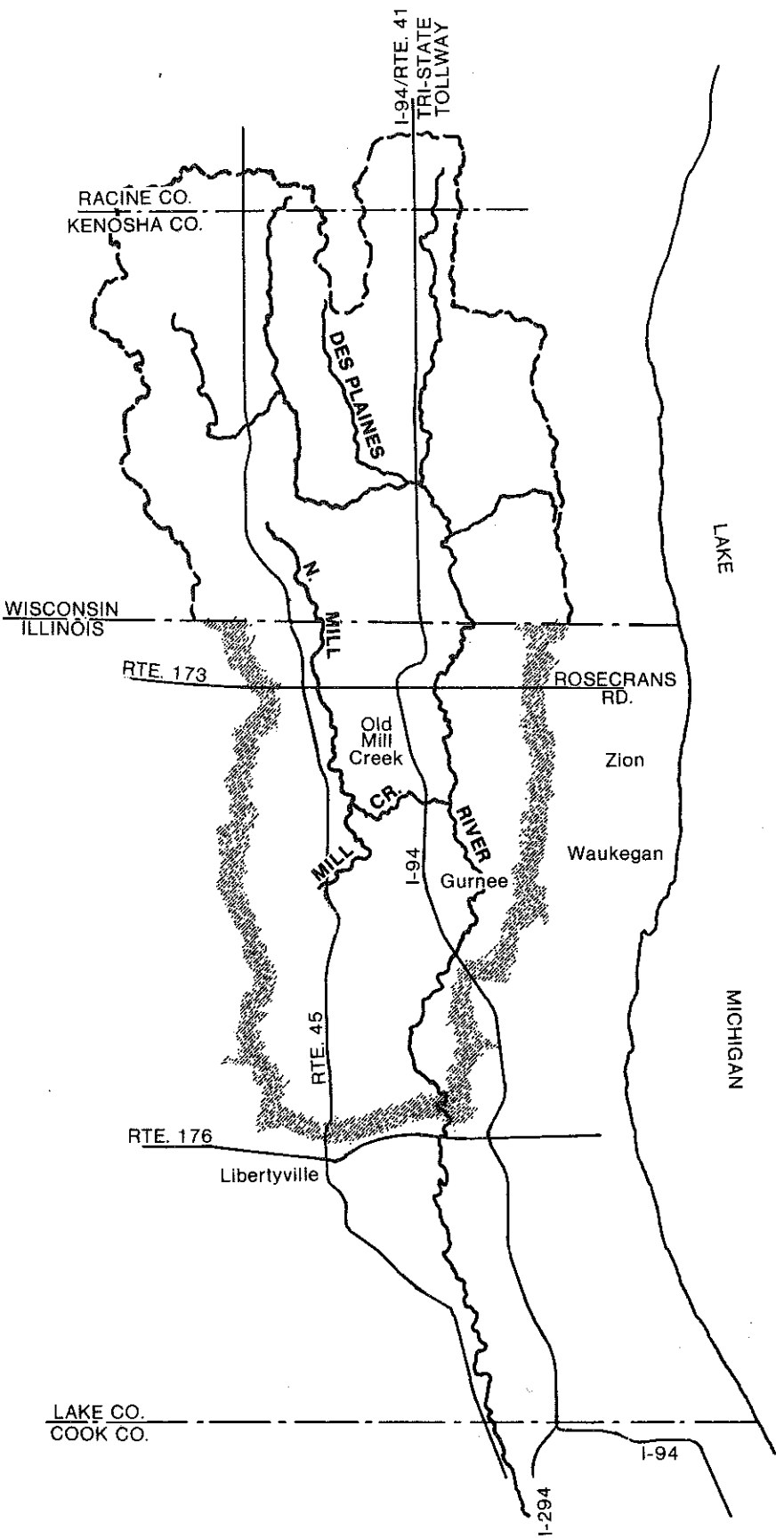
Virtually all excess combined sewage will be captured by the ultimate tunnel-reservoir system. In addition, waterway stages will be controlled, eliminating overbank and basement flooding, and the opening of the gates separating the inland waterways from Lake Michigan to allow the polluted raw sewage to flow into the Lake.


Kenosha
WISCONSIN
ILLINOIS
Woodstock
McHENRY
A
LAKE
Libertyville
Waukegan
LAKE
Highland
Park
Palatine
B
I
G
H
Evanston
MICHIGAN
Elgin
De Kalb
C
DE KALB
Elmhurst
COOK
Chicago
KANE
TARP
DU PAGE
SERVICE
F
LEE
Aurora
AREA
D
Gary
E
KENDALL
Joliet
Chicago
Heights
LA SALLE
Morris
WILL
Ottawa
GRUNDY
N

Watersheds of the Chicago Metropolitan Area

Map Key	Name	Area (Square Miles)	Area Subject to Flooding (Acres)	Length of Rivers and Tributaries (Miles)	Page
A	Upper Des Plaines River	370	13,000	62	15
B	North Branch Chicago River	102	5,500	57	17
C	Lower Des Plaines River Tributaries	300	22,000	188	19
D	Cal-Sag Channel	117	1,050	25	23
E	Little Calumet River	213	10,800	109	25
F	DuPage River	353	8,623	129	27
G	Fox River	1,720	(Not Available)	117 (Main Stem)	29
H	Poplar Creek	40	1,525	26	31
I	Upper Salt Creek	52	1,940	17	33
	Totals	3,767	64,438	730	

Upper Des Plaines River Watershed



PROGRAM STATUS

The Upper Des Plaines River watershed is unique in the Chicago metropolitan area because it is largely rural in character. The floodwater management plan developed for it as part of the Chicago Metropolitan Area Floodwater Management Study focuses on non-structural programs to prevent future damages from occurring. These programs include land acquisition, land protection and floodplain regulations.

Land Protection Program

The Lake County Soil and Water Conservation District, working with the people and communities in the Upper Des Plaines Watershed, has developed and is implementing a program for land protection based on the identified needs of the watershed. Seven of the eleven municipalities in the watershed and unincorporated Lake County now have soil erosion and sedimentation control ordinances. The municipalities are Grayslake, Mundelein, Third Lake, Libertyville, Green Oaks, Waukegan and Lindenhurst.

Most of the development in the watershed is now occurring in the areas that have regulations. Nine of the twelve governing bodies also have storm water managment regulations and eleven have floodplain regulations.

Resource management goals in the watershed include row crop management systems, soil conservation and programs to install grass waterways and improve wildlife habitat. Approximately 50 percent of the agricultural land is now protected by land treatment programs and 60 percent in conservation tillage.

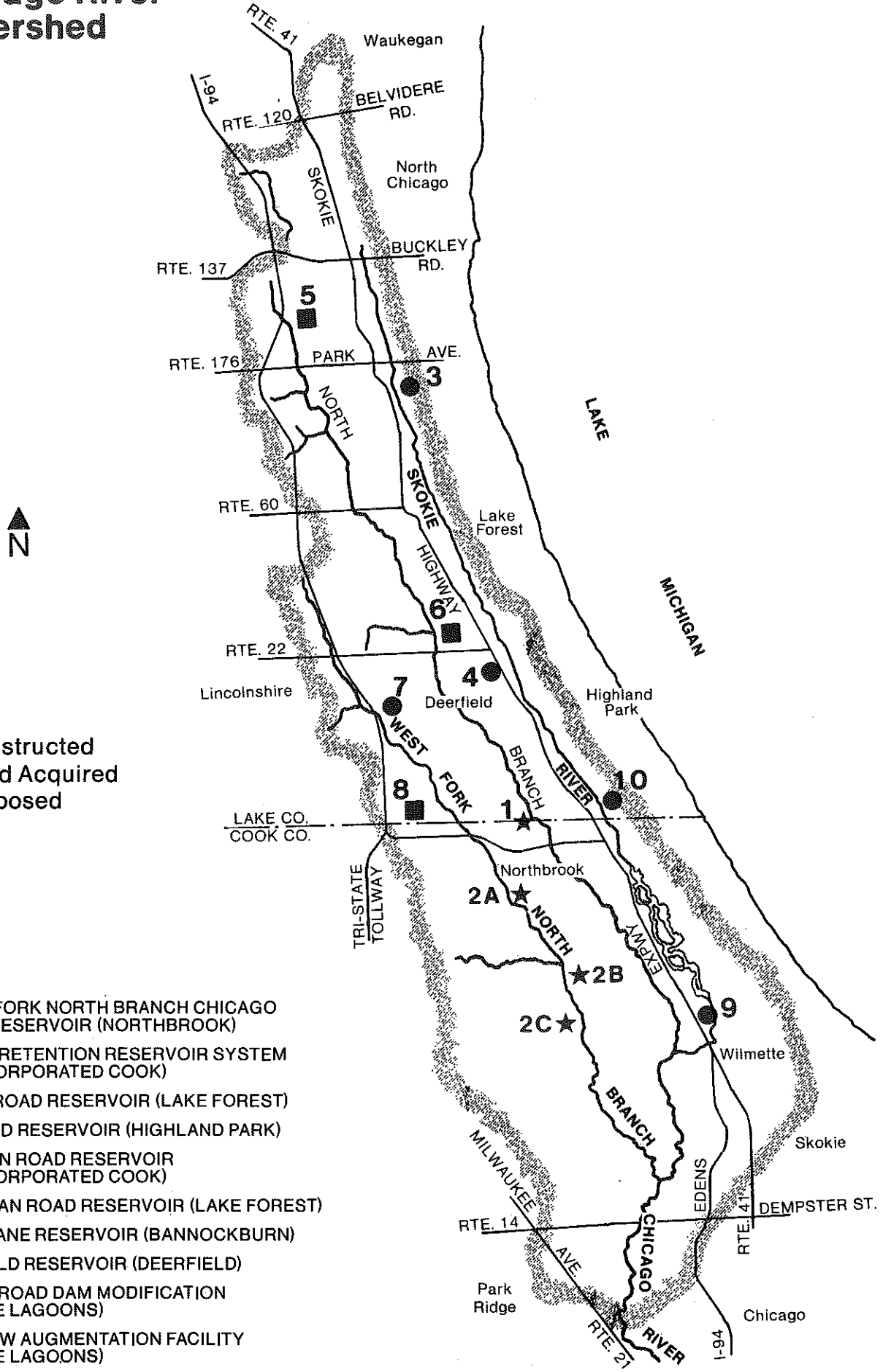
Land Acquisition Program

The Lake County Forest Preserve District has actively pursued a program of open land, wetland and floodplain purchase in the Upper Des Plaines River Watershed. To date, 3,906 acres of land adjacent to the River and its tributaries have been acquired by the District. Only a few parcels remain to be acquired to achieve the District's goal of providing continuous open space along the entire length of the Upper Des Plaines River.

Floodplain Regulations

The Illinois Division of Water Resources has authority to regulate the floodplain throughout the Upper Des Plaines Watershed in Illinois. The Division uses the best available floodplain information, which includes the data developed by the SCS for the floodwater management plan, to define those area subject to flooding. Any construction proposed within flood prone areas must be permitted by the DWR and not significantly increase stage or flood damage downstream.

North Branch Chicago River Watershed



N

KEY:

★ Constructed
■ Land Acquired
● Proposed

1 MIDDLE FORK NORTH BRANCH CHICAGO RIVER RESERVOIR (NORTHBROOK)
2 TECHNY RETENTION RESERVOIR SYSTEM (UNINCORPORATED COOK)
3 SKOKIE ROAD RESERVOIR (LAKE FOREST)
4 HIGHLAND RESERVOIR (HIGHLAND PARK)
5 ATKINSON ROAD RESERVOIR (UNINCORPORATED COOK)
6 WAUKEGAN ROAD RESERVOIR (LAKE FOREST)
7 DUFFY LANE RESERVOIR (BANNOCKBURN)
8 DEERFIELD RESERVOIR (DEERFIELD)
9 WILLOW ROAD DAM MODIFICATION (SKOKIE LAGOONS)
10 LOW FLOW AUGMENTATION FACILITY (SKOKIE LAGOONS)

Projects of the Metropolitan Sanitary District

1 MIDDLE FORK NORTH BRANCH CHICAGO RIVER RESERVOIR (Completed in 1975)

VOLUME: 600 acre-feet
FLOOD PROTECTION TO: Northbrook, Northfield, Glenview
Morton Grove, Niles
COST: Construction - $2,900,000 (MSD)
Land - 22 acres donated by the Homart Corp. (Sears Roebuck Inc.) $776,000 (1976) Est.
MAINTENANCE: Homart Corp. and MSD

2 TECHNY RETENTION RESERVOIR SYSTEM (Completed in 1979)

Entire system maintained by MSD.

NORTHBROOK RESERVOIR (EXCAVATED)
VOLUME: 250 acre-feet

TECHNY RESERVOIR (GRAVITY LAKE)
VOLUME: 300 acre-feet

GLENVIEW RESERVOIR (EXCAVATED)
VOLUME: 850 acre-feet
FLOOD PROTECTION TO: Glenview, Morton Grove, Niles
COST: Construction - $3,831,000 (MSD)
Land donated by Techny Orders
Estimated value $5,280,000 (1978)

Projects Planned by the Soil Conservation Service and Currently being Reaffirmed by the Corps

3 SKOKIE ROAD RESERVOIR (STRUCTURE 4)

VOLUME: 1,446 acre-feet
FLOOD PROTECTION TO: Lake Forest, Unincorporated Cook
COST: Construction - $7,254,000 Estimate
Land - DWR and Lake County Forest Preserve District currently finalizing acquisition.
Estimated value - $761,000 (I981)

4 HIGHLAND RESERVOIR (STRUCTURE 7)

VOLUME: 765 acre-feet
FLOOD PROTECTION TO: Highland Park
COST: Construction - $4,419,000 Estimate
Land - $1,875,000 Estimate (1973)

5 ATKINSON ROAD RESERVOIR (STRUCTURE 15)

VOLUME: 600 acre-feet
FLOOD PROTECTION TO: Lake Forest, Unincorporated Lake and Cook Counties
COST: Construction - $2,713,000 Estimate
Land - $426,000 (DWR)

6 WAUKEGAN ROAD RESERVOIR (STRUCTURE 18)

VOLUME: 2068 acre-feet
FLOOD PROTECTION TO: Bannockburn, Highland Park, Deerfield
COST: Construction - $10,063,000 Estimate
Land - $1,180,000 (DWR)
$604,000 (Lake County Forest Preserve Dist.)

7 DUFFY LANE RESERVOIR (STRUCTURE 27)

VOLUME: 618 acre feet storage
FLOOD PROTECTION TO: Lincolnshire, Bannockburn, Deerfield
COST: Construction - $3,413,000 Estimate
Land - DWR and Lake County Forest Preserve District currently proceeding with acquisition.
Estimated cost - $1,020,000 (1973)

8 DEERFIELD RESERVOIR (STRUCTURE 29)

VOLUME: 586 acre-feet
FLOOD PROTECTION TO: Deerfield, Northbrook, Glenview
COST: Construction - $3,360,000 Estimate
Land - $250,000 (DWR)
$750,000 (Deerfield)

9 WILLOW ROAD DAM MODIFICATION - SKOKIE LAGOONS

PURPOSE: Two automatic control gates to improve flood control feature of the lagoon
FLOOD PROTECTION TO: Northfield, Wilmette, Glenview, Niles, Morton Grove
COST: Construction - $123,000 Estimate
Land - $10,000 Estimate (1973)

10 LOW FLOW AUGMENTATION FACILITY - SKOKIE LAGOONS

PURPOSE: Pumping plant and 10,000 feet of 24-inch diameter pipeline from Lake Michigan to augment low flows in Skokie Lagoons
COST: Construction - $1,433,000 Estimate
Land - $40,000 Estimate (1973)

All estimated construction costs include engineering and administration and are updated to February 1981.

PROGRAM STATUS

Federal Funding Status

The 1976 Water Resources Development Act authorized a Phase I General Design Memorandum (GDM) Study for the North Branch Watershed to be performed by the Corps of Engineers. The study is now investigating the main features of the Plan prepared by the Soil Conservation Service in October 1974. The Phase I GDM report will contain an evaluation of the federal interest in, and the feasibility of, constructing the reservoirs identified in the Plan. Work on the Phase I GDM should be completed in fiscal year 1981.

Land Protection Program

Soil erosion and sedimentation control ordinances have been enacted in the communities of Deerfield, Glenview, Green Oaks, Bannockburn, and unincorporated Cook and Lake Counties.

The North Cook Soil and Water Conservation District is providing technical assistance. The land protection programs are presently being evaluated by the District to determine their effectiveness and to make recommendations for improving them if necessary.

Channel Maintenance (Stream Preservation) Program

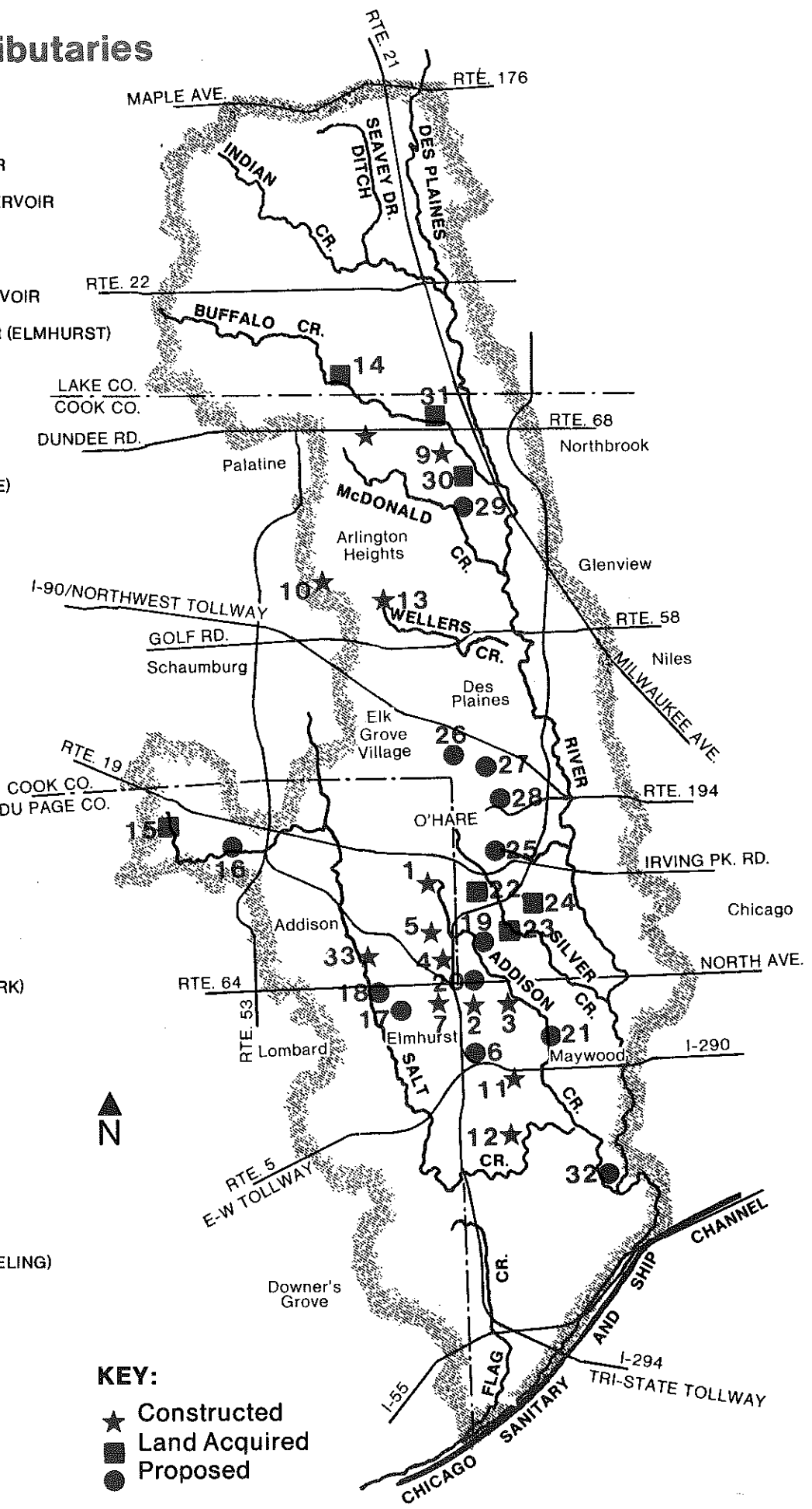
The Illinois Division of Water Resources is serving as lead agency for the development and coordination of a watershed-wide stream preservation program. The proposed program will be ready for the watershed communities to implement by the end of 1981.

Floodplan Regulations

The Illinois Division of Water Resources implemented a floodplain regulation use permit procedure for the entire watershed in 1975. Floodplain maps and profiles developed during the Soil Conservation Service plan formulation are used by the State in implementing the regulations. Construction within the designated floodplain must have a permit which requires no stage or flood water velocity increases.

Lower Des Plaines Tributaries Watershed

1 WILLIAM REDMOND RESERVOIR (BENSENVILLE)
2 GENE DOYLE DETENTION RESERVOIR (NORTHLAKE)
3 LAKE STREET CULVERT
4 RAILROAD AVENUE RESERVOIR (NORTHLAKE)
5 ARLINGTON CEMETERY RESERVOIR (NORTHLAKE)
6 LOWER ELMHURST RESERVOIR (ELMHURST)
7 YORK ROAD, I-90 RESERVOIR (ELMHURST)
8 WHITE PINE DITCH RESERVOIR
9 HERITAGE PARK RESERVOIR (WHEELING)
10 WILKE-KIRCHOFF RESERVOIR (ARLINGTON HEIGHTS)
11 HILLSIDE RESERVOIR (HILLSIDE)
12 MAYFAIR RESERVOIR (WESTCHESTER)
13 MT. PROSPECT RESERVOIR (MT. PROSPECT)
14 BUFFALO CREEK RESERVOIR (UNINCORPORATED LAKE & COOK CO.)
15 SPRING BROOK RESERVOIR (BLOOMINGDALE)
16 MEDINAH ROAD RESERVOIR (BLOOMINGDALE)
17 ELMHURST RESERVOIR (ELMHURST)
18 SALT CREEK CHANNEL IMPROVEMENT (VILLA PARK)
19 NORTHLAKE RESERVOIR (NORTHLAKE)
20 MELROSE PARK RESERVOIR (MELROSE PARK)
21 BELLWOOD RESERVOIR (BELLWOOD)
22 SILVER CREEK RESERVOIR (CHICAGO)
23 FRANKLIN PARK RESERVOIR (FRANKLIN PARK)
24 SILVER CREEK CHANNEL IMPROVEMENT (FRANKLIN PARK)
25 SCHILLER PARK RESERVOIR (CHICAGO)
26 RAVENSWOOD RESERVOIR (CHICAGO)
27 WILLOW CREEK RESERVOIR (CHICAGO)
28 WILLOW HIGGINS CHANNEL IMPROVEMENT (ROSEMONT)
29 McDONALD CREEK CHANNEL IMPROVEMENT (PROSPECT HEIGHTS)
30 BUFFALO WHEELING CHANNEL IMPROVEMENT (WHEELING)
31 BUFFALO WHEELING CHANNEL BRIDGE REPLACEMENT (WHEELING)
32 DES PLAINES RIVER DIKE (RIVERSIDE)
33 KINGERY WEST LEVEE (ADDISON)
34 LAKE O'HARE RESERVOIR (CHICAGO)



Projects of the Division of Water Resources

1 WILLIAM REDMOND RESERVOIR (Completed in 1977)
VOLUME: 685 acre-feet
FLOOD PROTECTION TO: Bensenville, Broadview, Northlake, Stone Park, Bellwood

COST: Construction - $4,588,000 (DWR)
Land - $132,000 (Bensenville)
$83,000 (DWR)
MAINTENANCE: Bensenville

2 GENE DOYLE DETENTION RESERVOIR (Completed in 1979)
VOLUME: 70 acre-feet
FLOOD PROTECTION TO: Northlake
COST: Construction - $1,373,000 (DWR)
Land - $165,000 (DWR)*
MAINTENANCE: Northlake

3 LAKE STREET CULVERT
(First Stage Completed in 1973)
PURPOSE: Improve drainage in residential area from Addison Creek to Lake Street and Mannheim Road
FLOOD PROTECTION TO: Northlake, Melrose Park, Stone Park
COST: Construction - $1,025,000 (DWR)
$2,644,000 (Division of Highways)
Land - $58,000 (DWR)*
MAINTENANCE: Northlake
(SECOND STAGE Completed in 1979)
PURPOSE: Improve drainage in residential area along Lake Street from Railroad Avenue to Mannheim Road
FLOOD PROTECTION TO: Northlake
COST: Construction - $1,625,000 (DWR)
$2,644,000 (Illinois Division of Highways)

4 RAILROAD AVENUE RESERVOIR (Completed in 1981)
VOLUME: 47 acre-feet
FLOOD PROTECTION TO: Northlake, Addison Creek Communities
COST: Construction - $645,000 (DWR)
Land - $215,000 (DWR)*
MAINTENANCE: Northlake

5 ARLINGTON CEMETERY RESERVOIR (Completed in 1981)
VOLUME: 71 acre-feet
FLOOD PROTECTION TO: Addison Creek Communities, Northlake
COST: Construction - $779,000 (DWR)
Land - $362,000 (DWR)*
MAINTENANCE: Elmhurst

6 LOWER ELMHURST RESERVOIR
VOLUME: 105 acre-feet
FLOOD PROTECTION TO: Elmhurst, Berkeley
COST: Construction - $1,420,000 Estimate (1980)
Land - Presently in public ownership*
Estimated value $10,000

7 YORK ROAD, I-90 RESERVOIR (Completed in 1979)
VOLUME: 20 acre-feet (Estimate)
FLOOD PROTECTION TO: Elmhurst
COST: Construction - $119,000 (Elmhurst)
$202,000 (DWR)
Land now in public ownership.
Estimated value $10,000
MAINTENANCE: Elmhurst

*Combined Land cost - local participation: Northlake, $65,000; Melrose Park, $44,000; Stone Park, $50,000; Bellwood, $30,000; Elmhurst, $190,000; Broadview, $7,000; Westchester, $14,000; Addison Creek Conservancy District, $68,000; Leyden Township, $70,000; Addison Township, $25,000.

Projects of the Metropolitan Sanitary District

8 WHITE PINE DITCH RESERVOIR (Completed in 1976)
VOLUME: 50 acre-feet
FLOOD PROTECTION TO: Buffalo Grove
COST: Construction - $120,000 (MSD)
$130,000 (DWR)
7,400 (Buffalo Grove)
Land rights provided by Buffalo Grove.
Estimated value $240,000 (1975)
MAINTENANCE: White Pine Golf Course and Buffalo Grove

9 HERITAGE PARK RESERVOIR (Completed in 1970)
VOLUME: 112 acre-feet
FLOOD PROTECTION TO: Wheeling
COST: Construction - $180,000 (MSD)
$90,000 (Wheeling)
Land donated by Wheeling Park District.
Estimated value $545,000 (1970)
MAINTENANCE: Wheeling Park District and Wheeling

10 WILKE-KIRCHOFF RESERVOIR (Completed in 1973)
VOLUME: 100 acre-feet
FLOOD PROTECTION TO: Arlington Heights
COST: Construction - $736,000 (MSD)
- $135,000 (Arlington Heights)
Land - $232,000 (Arlington Heights)
MAINTENANCE: Arlington Heights

11 HILLSIDE RESERVOIR (Completed in 1976)
VOLUME: 100 acre-feet
FLOOD PROTECTION TO: Hillside, Westchester
COST: Construction - $920,000 (MSD)
Land - $371,000 (MSD); 2 acres donated by Hillside. Estimated value $148,000 (1976)
MAINTENANCE: Hillside

12 MAYFAIR RESERVOIR (Completed in 1977)
VOLUME: 74 acre-feet
FLOOD PROTECTION TO: Westchester
COST: Construction - $545,000 (MSD)
Land - $280,000 (MSD)
MAINTENANCE: Westchester

13 MT. PROSPECT RESERVOIR (Completed in 1978)
VOLUME: 130 acre-feet
FLOOD PROTECTION TO: Mt. Prospect
COST: Construction - $1,252,000 (MSD)
Land - $3,175,000 (MSD)
MAINTENANCE: Arlington Heights and Mt. Prospect

14 BUFFALO CREEK RESERVOIR
VOLUME: 700 acre-feet

FLOOD PROTECTION TO: Buffalo Grove, Wheeling, Unincorporated Cook County
COST: Plans and specifications now being developed.
Construction - $4,390,000 Estimate (MSD)
Land - $1,500,000 Estimate (MSD)
MAINTENANCE: Lake County Forest Preserve District, Buffalo Grove, and MSD

Continued.....

15 SPRING BROOK RESERVOIR (STRUCTURE 4)
VOLUME: 495 acre-feet
FLOOD PROTECTION TO: Bloomingdale, Itasca, Wood Dale, Addison, Unincorporated DuPage County
COST: Construction - $2,839,000 Estimate
Land - $837,000 (DuPage County Forest Preserve District)

16 MEDINAH ROAD RESERVOIR (STRUCTURE 5)
VOLUME: 982 acre-feet
FLOOD PROTECTION TO: Itasca, Wood Dale, Addison, Unincorporated DuPage County
COST: Construction - $1,969,000 Estimate
Land to be acquired by DuPage County Forest Preserve District.
Estimated Cost - $1,080,000 (1976)

17 ELMHURST RESERVOIR (STRUCTURE I5)
VOLUME: 4232 acre-feet

FLOOD PROTECTION TO: Villa Park, Elmhurst, Oak Brook, Brookfield
COST: Construction - $12,674,000 Estimate
Land to be acquired by DWR.
Estimated Cost - $5 - $10 million.

18 SALT CREEK CHANNEL IMPROVEMENT
DESCRIPTION: 2400 feet of enlarged rip-rap lined channel
FLOOD PROTECTION TO: Elmhurst, Villa Park
COST: Construction - $818,000 Estimate
Land - 80% acquired by Elmhurst and DuPage County Forest Preserve District.
Approximately $1,500,000 spent to date.

19 NORTHLAKE RESERVOIR (STRUCTURE 86)
VOLUME: 389 acre-feet
FLOOD PROTECTION TO: Northlake, Melrose Park, Bellwood
COST: Construction - $3,628,000 Estimate
Land to be acquired by MSD.
Estimated Cost - $1,505,000 (1976)

20 MELROSE PARK RESERVOIR (STRUCTURE 92)
VOLUME: 489 acre-feet
FLOOD PROTECTION TO: Melrose Park, Bellwood
COST: Construction - $4,760,000 Estimate
Land to be acquired by MSD.
Estimated Cost - $1,338,000 (I976)

21 BELLWOOD RESERVOIR (STRUCTURE 94)
VOLUME: 296 acre-feet
FLOOD PROTECTION TO: Bellwood
COST: Construction - $3,583,000 Estimate
Land to be acquired by MSD.
Estimated Cost - $1,153,000 (1976)

22 SILVER CREEK RESERVOIR (STRUCTURE 102)
VOLUME: 702 acre-feet
FLOOD PROTECTION TO: Franklin Park, Unincorporated Cook County
COST: Construction - $7,191,000 Estimate
Land - $1,800,000 (MSD)
10 acres donated by City of Chicago.
Estimated value - $905,000 (I981)

23 FRANKLIN PARK RESERVOIR (STRUCTURE 106)
VOLUME: 208 acre-feet
FLOOD PROTECTION TO: Franklin Park, Melrose Park
COST: Construction - $3,606,000 Estimate
Plans and specifications prepared by DWR.
Land - $346,000 (DWR) 6.23 acres donated by Franklin Park. Estimated value $431,000 (1979)

24 SILVER CREEK CHANNEL IMPROVEMENT
DESCRIPTION: 2380 feet of enlarged rip-rap lined channel
FLOOD PROTECTION TO: Franklin Park
COST: Construction - $147,000 Estimate
Land to be acquired by DWR.
Estimated cost $67,000 (1976)

25 SCHILLER PARK RESERVOIR (STRUCTURE 122)
VOLUME: 222 acre-feet
FLOOD PROTECTION TO: Schiller Park
COST: Construction - $1,582,000 Estimate
Land currently owned by City of Chicago
Estimated value $1,025,000 (1976)

26 RAVENSWOOD RESERVOIR (STRUCTURE 134)
VOLUME: 874 acre-feet
FLOOD PROTECTION TO: Des Plaines, Rosemont, Unincorporated Cook County
COST: Construction - $9,179,000 Estimate
MSD currently constructing reservoir of 510 acre-feet to be extended when federal funding is received. Construction cost to MSD equals $8,512,000. Land - $904,000 (MSD), 58 acres owned by Chicago.
Estimated total value - $3,404,000 (1981)

27 WILLOW CREEK RESERVOIR (STRUCTURE 141)
VOLUME: 496 acre-feet
FLOOD PROTECTION TO: Des Plaines, Rosemont
COST: Construction - $4,462,000 Estimate
Land currently owned by City of Chicago.
Estimated value $2,660,000 (1976)

28 WILLOW-HIGGINS CHANNEL IMPROVEMENT
DESCRIPTION: 2,200 feet of 9 foot square box culvert; 2,000 feet of enlarged rip-rap lined channel
FLOOD PROTECTION TO: Des Plaines, Rosemont
COST: Construction - $2,983,000 Estimate
Land to be acquired by Rosemont and Des Plaines. Estimated cost - $269,000 (I976)

29 McDONALD CREEK CHANNEL IMPROVEMENT AND DIVERSION CHANNEL
CHANNEL IMPROVEMENT: 1600 feet of enlarged rip-rap lined channel
DIVERSION CHANNEL: 2800 feet of new channel
FLOOD PROTECTION TO: Arlington Heights, Prospect Heights
COST: Construction - $231,000 Estimate
Land to be acquired by Prospect Heights.
Estimated Cost - $51,000 (1976)

30 BUFFALO-WHEELING CHANNEL IMPROVEMENT AND DIVERSION CHANNEL

CHANNEL IMPROVEMENT: 9100 feet of enlarged rip-rap lined channel
DIVERSION CHANNEL: 8400 feet of new channel to divert flow to the Des Plaines River
FLOOD PROTECTION TO: Wheeling
COST: Construction - $1,105,000 Estimate
Land to be acquired by DWR, Wheeling and Cook
County Forest Preserve District. Acquisition 95 percent completed.
Estimated value $397,000 (1976)

31 BUFFALO-WHEELING CHANNEL BRIDGE REPLACEMENT

LOCATION: Route 83 and McHenry Road
FLOOD PROTECTION TO: Residential areas of Wheeling
COST: Construction -$241,000 (Illinois Divisions of Highways and Water Resources.)

DES PLAINES RIVER DIKE

LENGTH: 3600 feet
FLOOD PROTECTION TO: 40 residential structures in Riverside Lawn
COST: Construction - $425,000 Estimate
Land - 95 percent in Cook County Forest Preserve District ownership.
Estimated value $62,000 (1976)

Projects of the DuPage County Forest Preserve District

33 KINGERY WEST LEVEE

LOCATION: East side of Salt Creek between North Avenue and Fullerton Avenue
FLOOD PROTECTION TO: Kingery West Subdivision of Addison
COST: Construction - $850,000 Estimate (DuPage County Forest Preserve District)
$1,015,000 (DWR)
Land - $3,750,000 (DuPage County Forest Preserve District)
MAINTENANCE: DuPage County Forest Preserve Dist.

Projects of the City of Chicago

34 LAKE O'HARE RESERVOIR

LOCATION: O'Hare Airport on Crystal Creek
VOLUME: 100 acre-feet
FLOOD PROTECTION TO: Neighboring O'Hare Airport Communities
COST: Construction - $2,500,000 Estimate
Land - owned by Chicago
Estimated value - $122,000 (1955)
MAINTENANCE: City of Chicago

All estimated construction cost includes engineering and project administration and are updated to February 1981.

PROGRAM STATUS

Funding

A watershed plan is currently being finalized for the Lower Des Plaines Tributaries Watershed. The completed plan will be submitted to the U.S. Congress for authorization of construction funds.

Floodplain Regulations

The Division of Water Resources has initiated regulations for Lower Salt Creek and the main stem of the Des Plaines River. Regulations must be implemented on the remaining tributaries to the Des Plaines River. Floodplain maps and profiles developed by the Soil Conservation Service are used for the regulations. Construction within the designated floodway requires a permit from the DWR and must not increase floodwater stage or velocity. Implementation of regulations for the remaining Lower Des Plaines tributaries is scheduled for completion later in 1981.

Channel Maintenance (Stream Preservation) Program

The Illinois Division of Water Resources is lead agency for the development and coordination of a watershed-wide stream preservation program. The proposed program will be ready for the watershed communities to implement by the end of 1981. The program will outline annual inspection and maintenance procedures.

Floodproofing Program

Approximately 1500 existing structures will remain subject to flooding by the 100 year frequency flood event after installation of the structural measures. The owners have been notified of this fact through their local government. Floodproofing technical assistance to these owners is available through the Division of Water Resources.

Land Protection Program

A land protection program is now being developed by a sub-committee of the Lower Des Plaines Tributaries Steering Committee. An inventory of the identified land protection needs has been completed and a program is now being formulated based on the identified needs.

Communities with soil erosion and sedimentation ordinances include Buffalo Grove, Wheeling, Prospect Heights, Arlington Heights, Des Plaines, Rolling Meadows, Northlake, Hawthorne Woods, Lake Zurich, Libertyville, Long Grove, Mundelein, Riverwoods, Vernon Hills, unincorporated areas in Lake and Cook Counties and some communities in DuPage County.

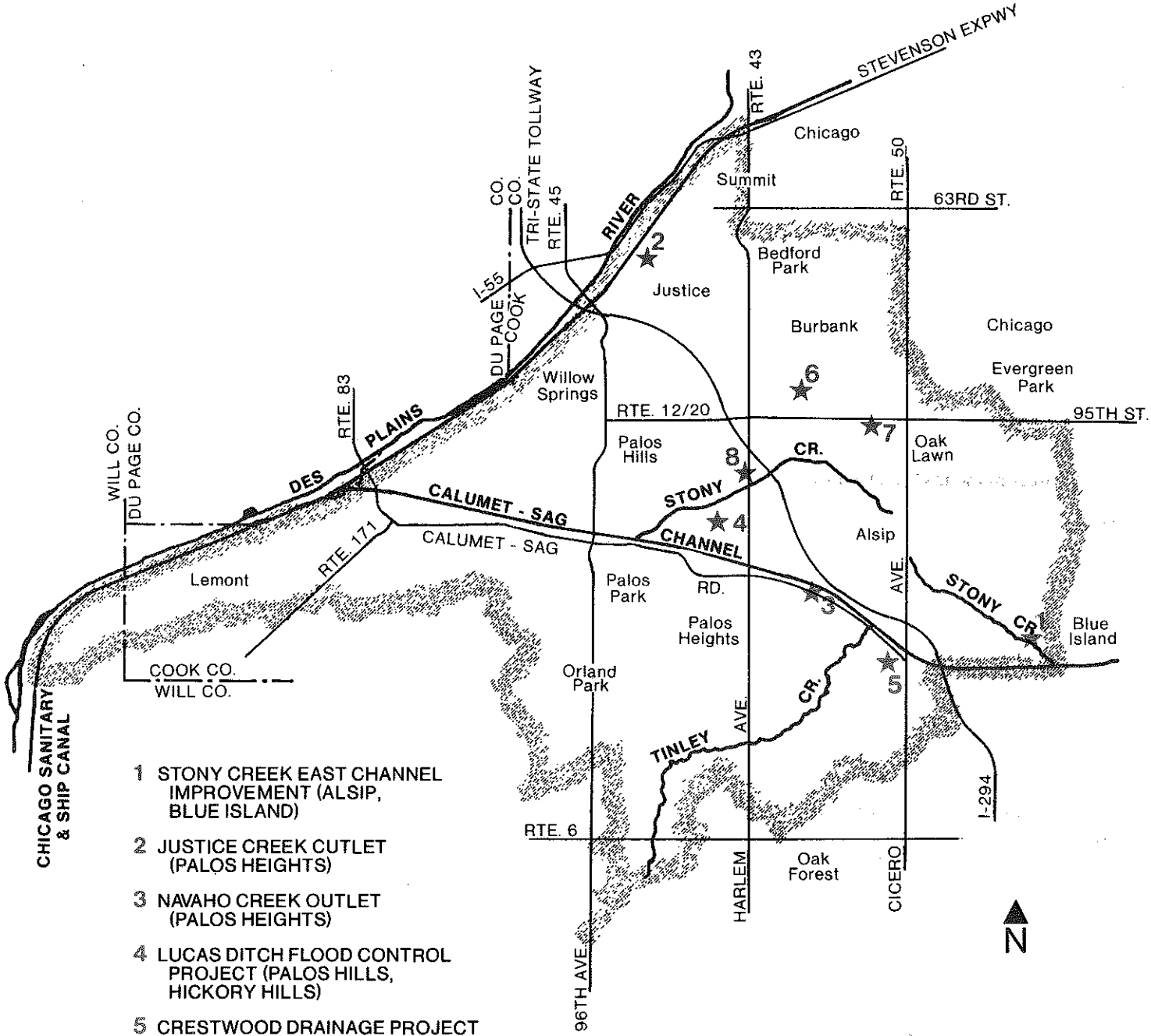
Structure Acquisition Program

The State of Illinois and the DuPage County Forest Preserve District have actively acquired residential buildings subject to frequent and severe flooding. To date, 62 structures have been acquired and removed. Nine residential buildings designated as subject to severe flooding remain to be purchased.

Land Purchase Program

The purchase of open space and wetlands as identified in the Des Plaines Floodwater Management Plan continues. The DuPage County Forest Preserve District recently purchased Campbell Slough, a high quality wetland area, which it will preserve in its natural state.

Cal-Sag Watershed



1 STONY CREEK EAST CHANNEL IMPROVEMENT (ALSIP, BLUE ISLAND)

2 JUSTICE CREEK CUTLET (PALOS HEIGHTS)

3 NAVAHO CREEK OUTLET (PALOS HEIGHTS)

4 LUCAS DITCH FLOOD CONTROL PROJECT (PALOS HILLS, HICKORY HILLS)

5 CRESTWOOD DRAINAGE PROJECT (CRESTWOOD)

6 MELVINA DITCH RESERVOIR AND CHANNEL IMPROVEMENT (OAK LAWN)

7 OAK LAWN RETENTION RESERVOIR (OAK LAWN)

8 STONY CREEK WEST CHANNEL IMPROVEMENT (PALOS HILLS, HICKORY HILLS, WORTH, CHICAGO RIDGE)

KEY:

★ Constructed

■ Land Acquired

● Proposed

Projects of Division of Water Resources

1 STONY CREEK EAST CHANNEL IMPROVEMENT AND OUTLET CHANNEL (Completed in 1977)
PURPOSE: Improve flow in creek and discharge into Cal-Sag Channel; Approximate length 3.2 miles
FLOOD PROTECTION TO: Alsip, Blue Island, Merrionette Park
COST: Construction - $1,262,000 (DWR)
Land obtained by MSD.
Estimated value $10,000 (early 1960's)

2 JUSTICE CREEK OUTLET (Completed in 1974)
PURPOSE: Improve discharge into Sanitary and Ship Canal; length 450 feet
FLOOD PROTECTION TO: Justice
COST: Construction - $96,000 (DWR)
Land obtained by MSD.
Estimated value $10,000

3 NAVAHO CREEK OUTLET (Completed in 1975)
PURPOSE: Improve discharge into Calumet-Sag Channel
FLOOD PROTECTION TO: Palos Heights
COST: Construction - $14,000 Estimate (DWR)

4 LUCAS DITCH FLOOD CONTROL PROJECT
PURPOSE: 12,760 foot channel improvement and 4200 foot diversion channel to improve drainage
FLOOD PROTECTION TO: Palos Hills, Hickory Hills
COST: Construction - $185,000 Estimate (1961)
Land obtained by MSD, approximately 16 acres.
Estimated value - $32,000 (1962)

5 CRESTWOOD DRAINAGE PROJECT (Completed in 1974)
PURPOSE: Improve drainage in Crestwood and divert floodwaters from Tinley Creek
FLOOD PROTECTION TO: Crestwood
COST: Construction - $179,000 (DWR)
MAINTENANCE: Crestwood

Projects of Metropolitan Sanitary District

6 MELVINA DITCH RESERVOIR AND CHANNEL IMPROVEMENT (Completed in 1973)
VOLUME: 165 Acre-feet
CHANNEL IMPROVEMENT LENGTH: Approximately 1 mile
FLOOD PROTECTION TO: Bedford Park, Oak Lawn
COST: Construction - $1,900,000 (MSD)
$500,000 (Oak Lawn)
Land obtained by MSD.
Estimated value - $119,000 (1973)
MAINTENANCE: Oak Lawn, Oak Lawn Park District and MSD

7 OAK LAWN RETENTION RESERVOIR (Completed in 1971)
VOLUME: 24 Acre-feet
FLOOD PROTECTION TO: Oak Lawn
COST: Construction - $120,000 (MSD)
Land donated by Oak Lawn.
Estimated value - $83,000 (1970)
MAINTENANCE: Oak Lawn

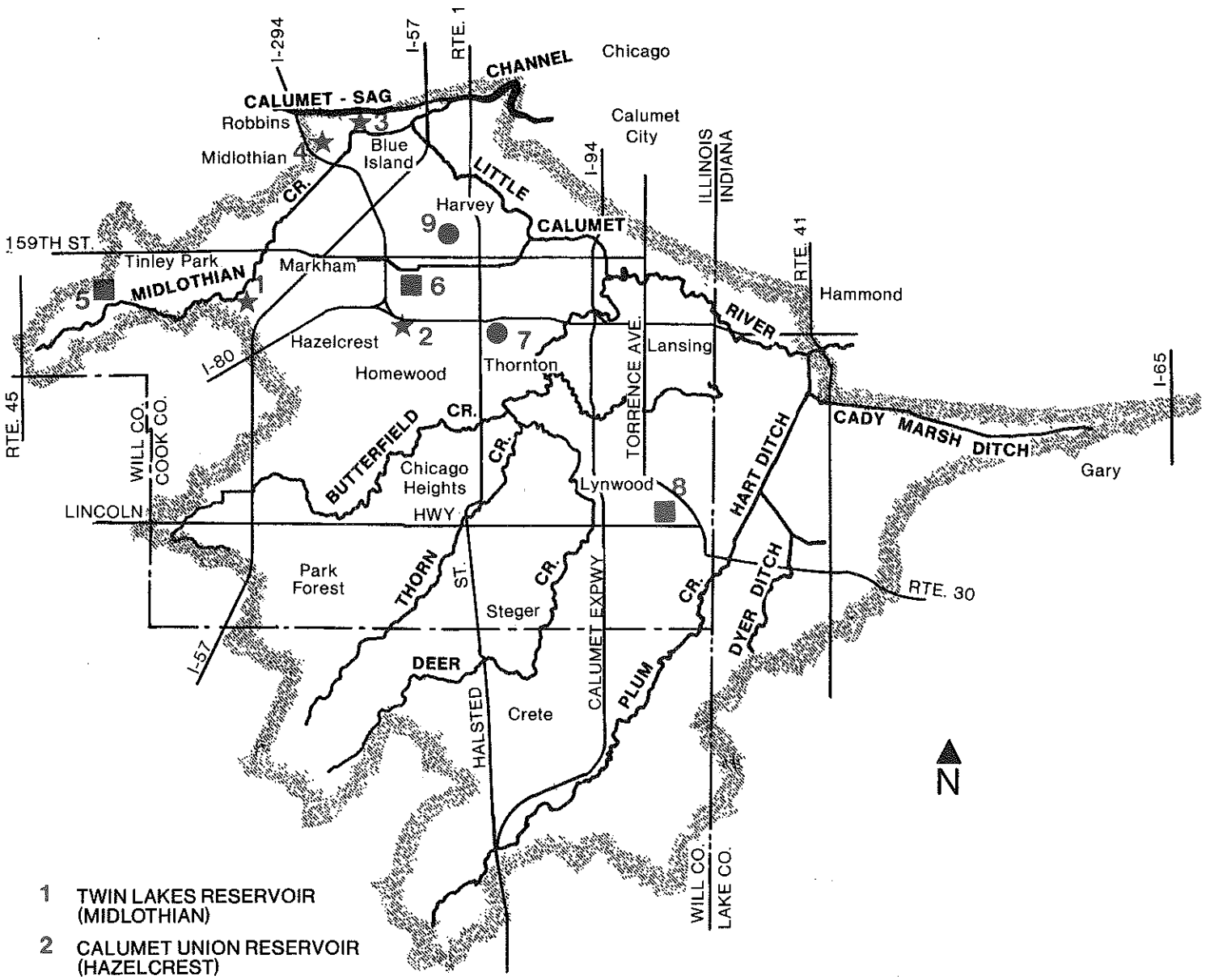
8 STONY CREEK WEST CHANNEL IMPROVEMENT (Completed in 1972)
PURPOSE: Improve flow in Creek and discharge into Cal-Sag. Approximate length - 5.7 miles
FLOOD PROTECTION TO: Palos Hills, Hickory Hills, Worth, Chicago Ridge
COST: Construction - $344,000 (MSD)
Land obtained by MSD.
Estimated value $17,000 (early 1960's)
MAINTENANCE: MSD

PROGRAM STATUS

Floodplain Regulations

The Illinois Division of Water Resources (DWR) has authority to regulate the floodplain throughout the Cal-Sag Watershed. The Division uses the best available floodplain information, which includes the data developed by the SCS for the floodwater management plan. Any construction proposed within flood prone areas must be permitted by DWR and not significantly increase stages or flood damages.

Little Calumet River Watershed



1 TWIN LAKES RESERVOIR (MIDLOTHIAN)

2 CALUMET UNION RESERVOIR (HAZELCREST)

3 MIDLOTHIAN CREEK DIVERSION CHANNEL (ROBBINS)

4 NATALIE CREEK DIVERSION CHANNEL (MIDLOTHIAN)

5 TINLEY PARK RESERVOIR (TINLEY PARK)

6 MARKHAM HARVEY RESERVOIR (MARKHAM)

7 THORNTON RESERVOIR (THORNTON)

8 LYNWOOD RESERVOIR (LYNWOOD)

9 CAL-UNION CHANNEL IMPROVEMENT (HARVEY)

KEY:

★ Constructed

■ Land Acquired

● Proposed

Projects of the Division of Water Resources

1 TWIN LAKES RESERVOIR (Completed in 1974)
VOLUME: 950 acre-feet
FLOOD PROTECTION TO: Midlothian, Tinley Park
COST: Construction - $939,400 (DWR)
Land furnished by Cook County Forest Preserve District, DWR, Village of Midlothian
Estimated value $273,000 (1974)
MAINTENANCE: Cook County Forest Preserve District

Projects of the Metropolitan Sanitary District

2 CALUMET UNION RESERVOIR (Completed in 1976)
VOLUME: 500 acre-feet
FLOOD PROTECTION TO: Hazelcrest, Markham, Harvey
COST: Construction - $2,838,000 (MSD)
Land - $414,500 (MSD)
MAINTENANCE: Hazelcrest Park District and MSD

Projects of the Cook County Highway Department

3 MIDLOTHIAN CREEK DIVERSION CHANNEL (Completed in 1980)
DESCRIPTION: 1200 feet channel improvement between 137th and 139th Streets; 2500 feet, 7.5' x 12' twin box conduit along Kedzie Avenue to Cal-Sag Channel
FLOOD PROTECTION TO: Robbins, Midlothian
COST: Construction - $1,482,000 (Cook County)
Land - Cook County, Robbins
MAINTENANCE: Cook County Highway Department

4 NATALIE CREEK DIVERSION CHANNEL
DESCRIPTION: 9200 feet, 96" and 48" pipe (147th to 135th Streets)
700 feet 102" pipe from 135th to Cal-Sag Channel
FLOOD PROTECTION TO: Midlothian
COST: Construction - $1,382,600 Estimate
Plans and specifications now being prepared.
MAINTENANCE: Cook County Highway Department

Projects of the Soil Conservation Service

5 TINLEY PARK RESERVOIR (STRUCTURE 32)
VOLUME: 678 acre-feet
FLOOD PROTECTION TO: Tinley Park, Midlothian
COST: Construction - $5,210,000 (Estimate)
Land - $1,450,000 est. - 37 acres (Tinley Pk.)
$313,000 est. - 8 acres (Tinley Pk Park Dist.)
$2,860,000 - 73 acres (MSD)
Recreation - $263,500 Estimate 1979 (Tinley Park Park District)
$263,500 Estimate 1979 (SCS)

6 MARKHAM HARVEY RESERVOIR (STRUCTURE 53)
VOLUME: 567 acre-feet
FLOOD PROTECTION TO: Markham, Harvey, South Holland
COST: Construction - $2,866,000 Estimate
Land - $750,000 Estimate (MSD)
$250,000 (Cook County)

7 THORNTON RESERVOIR (STRUCTURE 84)
VOLUME: 10,117 acre-feet
FLOOD PROTECTION TO: Dolton, South Holland, Hammond
Calumet City, East Chicago
COST: Construction - $26,764,000 Estimate
Land - $5,800,000 Estimate 1979
(DWR - 16 percent, MSD - 84 percent)

8 LYNWOOD RESERVOIR (STRUCTURE 143)
VOLUME: 1047 acre feet
FLOOD PROTECTION TO: Lynwood, Lansing
COST: Construction - $2,559,000 Estimate
Land - $1,300,000 (MSD)

9 CAL-UNION CHANNEL IMPROVEMENT
DESCRIPTION: 1.74 miles improved channel; 0.25 miles of concrete lined channel
FLOOD PROTECTION TO: Markham, Harvey, South Holland
COST: Construction - $1,500,000 Estimate
Land - $167,000 Estimate 1979 (Cal-Union Drainage District)

All estimated construction costs include engineering and administration and are updated to 1981.

PROGRAM STATUS

Federal Funding for the Soil Conservation Service Proposed Program

In December 1980, the Little Calumet River Watershed Plan and Environmental Impact Statement were transmitted to the President's Office of Management and Budget for fiscal review. From there, the Plan will then go to the House and Senate Public Works Committees for final approval. In the duration, local sponsors are proceeding to meet their commitments for land acquisition and non-structural program development and implementation.

Land Protection Program

Eight communities as well as unincorporated Cook and Will Counties have passed and are enforcing ordinances to control soil erosion losses on agriculture and developing land. The participating communities are Glenwood, Flossmoor, Park Forest, Oak Forest, Tinley Park, Hazelcrest, Homewood, and Blue Island.

Twenty six additional communities must also pass ordinances for the watershed to have full soil erosion and sedimentation control protection. Approximately 50 percent of the watershed is now protected. Three areas of high sediment production are included in this protected area. They are Plum Creek (16,700 acres) which is 85 percent adequately treated; Butterfield Creek (1,200 acres) which is 60 percent treated; and Midlothian Creek (2,400 acres) which is 65 percent treated. The protected area of Midlothian Creek is especially critical because it is upstream from the Tinley Park Reservoir. Likewise, the area upstream from the Lynwood Reservoir is 91 percent adequately treated. These measures will assure that sediment will not fill the reservoirs and rivers.

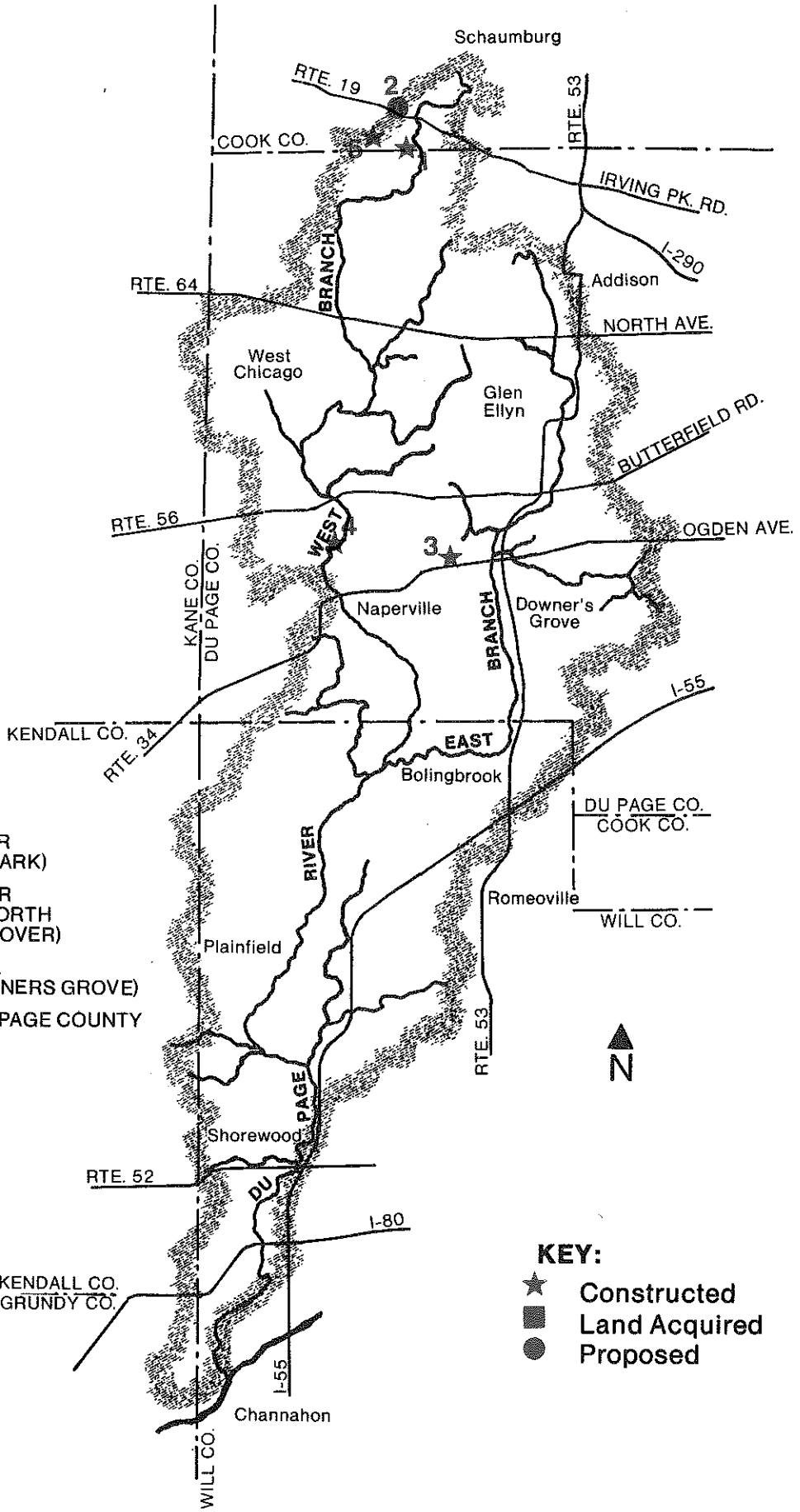
Floodplain Regulations

The Illinois Division of Water Resources in 1976 implemented floodplain use regulations throughout the Little Calumet Watershed. Floodplain maps and profiles developed by the Soil Conservation Service are used by the State for regulatory purposes. All water resource projects now considered by Congress require that the project area floodplains be regulated to prevent future build up and damages.

Channel Maintenance (Stream Preservation) Program

The Illinois Division of Water Resources is the coordinating agency for a proposed program that will be ready for the Little Calumet Steering Committee to implement by the end of 1981. The program will outline annual inspection and maintenance procedures.

DuPage River Watershed



1 WEST BRANCH DUPAGE RIVER IMPROVEMENT (HANOVER PARK)

2 WEST BRANCH DUPAGE RIVER CHANNEL IMPROVEMENT NORTH OF IRVING PARK ROAD (HANOVER)

3 ST. JOSEPH CREEK CHANNEL IMPROVEMENT (LISLE, DOWNERS GROVE)

4 NAPERVILLE RESERVOIR (DUPAGE COUNTY FOREST PERSERVE)

5 UPPER DUPAGE RESERVOIR (HANOVER)

Projects of the Division of Water Resources

1 WEST BRANCH DUPAGE RIVER CHANNEL IMPROVEMENT

PURPOSE: Channel modification to improve drainage in the Hanover Park residential area adjacent to the river
FLOOD PROTECTION TO: Hanover Park
LONG MEADOW ROAD TO CMSP AND P RAILROAD TRACKS 4,700 FEET (Completed in 1977)
COST: Construction - $280,000 (DWR)
Land rights furnished by MSD as part of Upper DuPage Reservoir Project

2 IRVING PARK ROAD TO LONG MEADOW ROAD 1,300 FEET (Completed in 1981)
COST: Construction - $88,000 (DWR)
Land rights furnished by Hanover Park
Estimated value - $10,000
MAINTENANCE: Hanover Park

WEST BRANCH DUPAGE RIVER CHANNEL IMPROVEMENT 1,700 FEET (NORTH OF IRVING PARK ROAD)

PURPOSE: Improve drainage in Hanover Park residential area.
FLOOD PROTECTION TO: Hanover Park
COST: Construction - $1,300,000
Estimate 1980 (DWR)
Land rights furnished by Hanover Park
Estimated value $20,000
MAINTENANCE: Hanover Park

3 ST. JOSEPH CREEK CHANNEL IMPROVEMENT (Completed in 1980)

PURPOSE: 14,200 feet of channel modification to improve drainage in Lisle and Downers Grove
FLOOD PROTECTION TO: Lisle, Downers Grove
COST: Construction $1,320,000 (DWR)
Land - $128,000 (DWR)

4 NAPERVILLE RESERVOIR (Completed in 1971)

VOLUME: 2,500 acre-feet
FLOOD PROTECTION TO: Naperville, Unincorporated DuPage County
COST: Construction - $568,000 (DWR)
Land - $975,000 (DWR)
MAINTENANCE: DuPage County Forest Preserve District

Projects of Metropolitan Sanitary District

5 UPPER DUPAGE RESERVOIR (Completed in 1977)

VOLUME: 230 acre-feet
FLOOD PROTECTION TO: Hanover Park
COST: Construction - $847,000 (MSD)
Land - $212,000 (MSD)
MAINTENANCE: Hanover Park Park District and MSD

PROGRAM STATUS

Floodwater Management Planning

The Corps of Engineers through the Chicago-Southeast Lake Michigan Urban Water Damage Study is investigating solutions to urban water damage problems caused by overbank flooding and poor drainage. The investigation of drainage problems is limited to flooding that results from the submergence of sewer outlets by high river stages. Because of the large size of the area, the study is being conducted through a series of six interim reports.

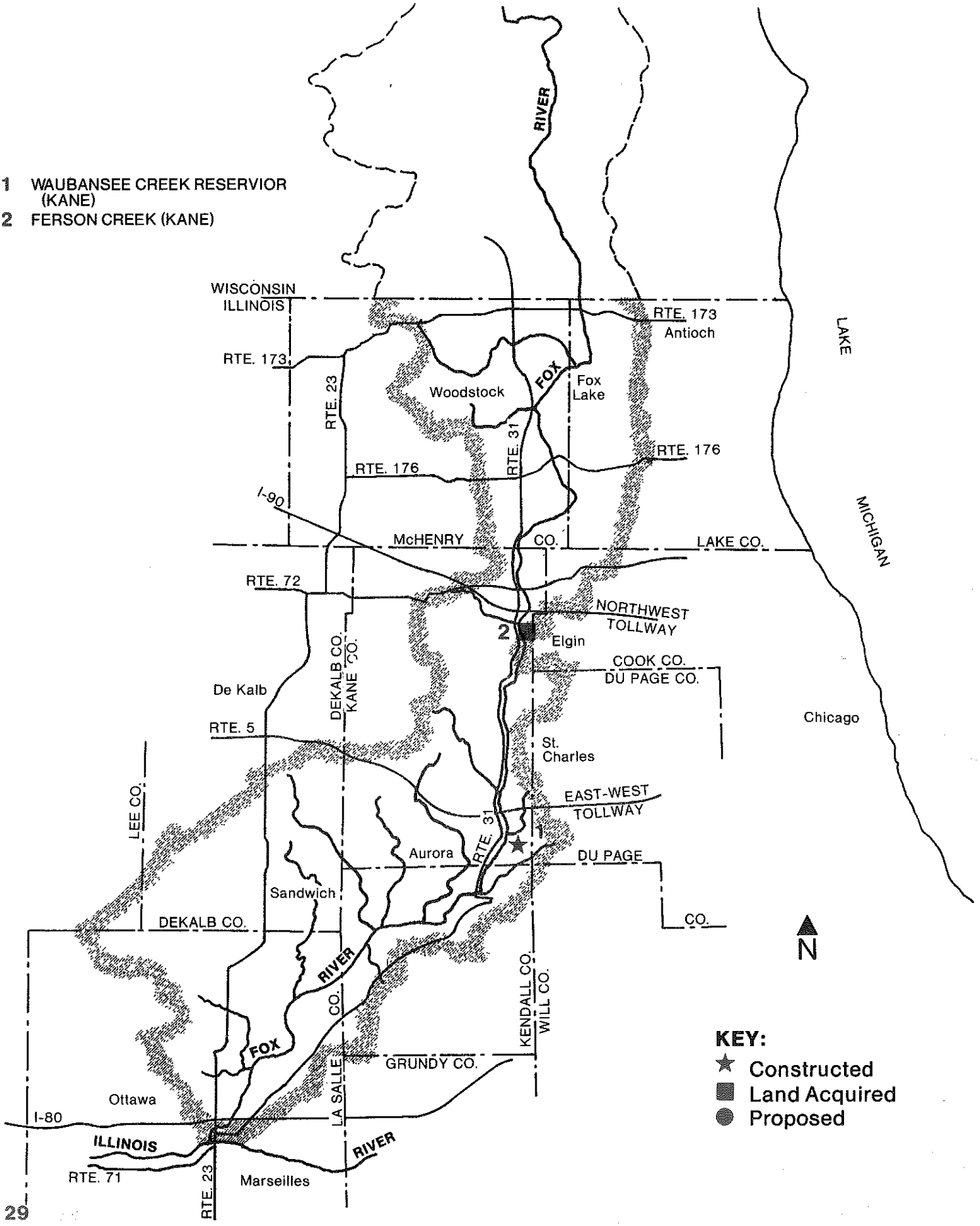
Work on Interim Report No. 2 for the DuPage River was started in 1976 and is scheduled to be completed in fiscal year 1981.

Floodplain Regulations

The Illinois Division of Water Resources has authority to regulate the floodplain throughout the DuPage River Watershed. The Division uses the best available floodplain information to define those areas subject to flooding. Any construction proposed within the flood prone areas must be permitted by the DWR and not significantly increase stages or flood damages.

Fox River Watershed

1 WAUBANSEE CREEK RESERVIOR (KANE)
2 FERSON CREEK (KANE)



Project of the Division of Water Resources

1 WAUBANSEE CREEK RESERVOIR (Completed in 1979)
VOLUME: 50 acre-feet
CHANNEL DIVERSION : 4000 feet
LEVEE: 3000 feet
FLOOD PROTECTION TO: 60 homes in Park View Estate, Subdivision of Village of Montgomery on Fox River
Cost: Construction - $914,000 (DWR)
Land - $119,000 (Montgomery)
MAINTENANCE: Montgomery

2 FERSON CREEK CHANNEL IMPROVEMENT
(To be completed in 1982)
LENGTH: 3900 feet
FLOOD PROTECTION TO: City of Elgin
COST: Construction - $269,000 (DWR)
Land - Obtained by City of Elgin
MAINTENANCE: City of Elgin

PROGRAM STATUS

Floodwater Management Planning

The Corps of Engineers is investigating the water resource problems and needs of the Fox River Basin to provide a plan for developing, utilizing, and conserving the basin's water and related land resources.

The Fox River Basin has a drainage area of 2,580 square miles and includes parts of both Illinois and Wisconsin. The character of the basin varies from resort-type developments in the north to predominantly rural areas in the south. The Fox River flows through the Chain of Lakes area, which contains several inter-connected lakes in northern Illinois.

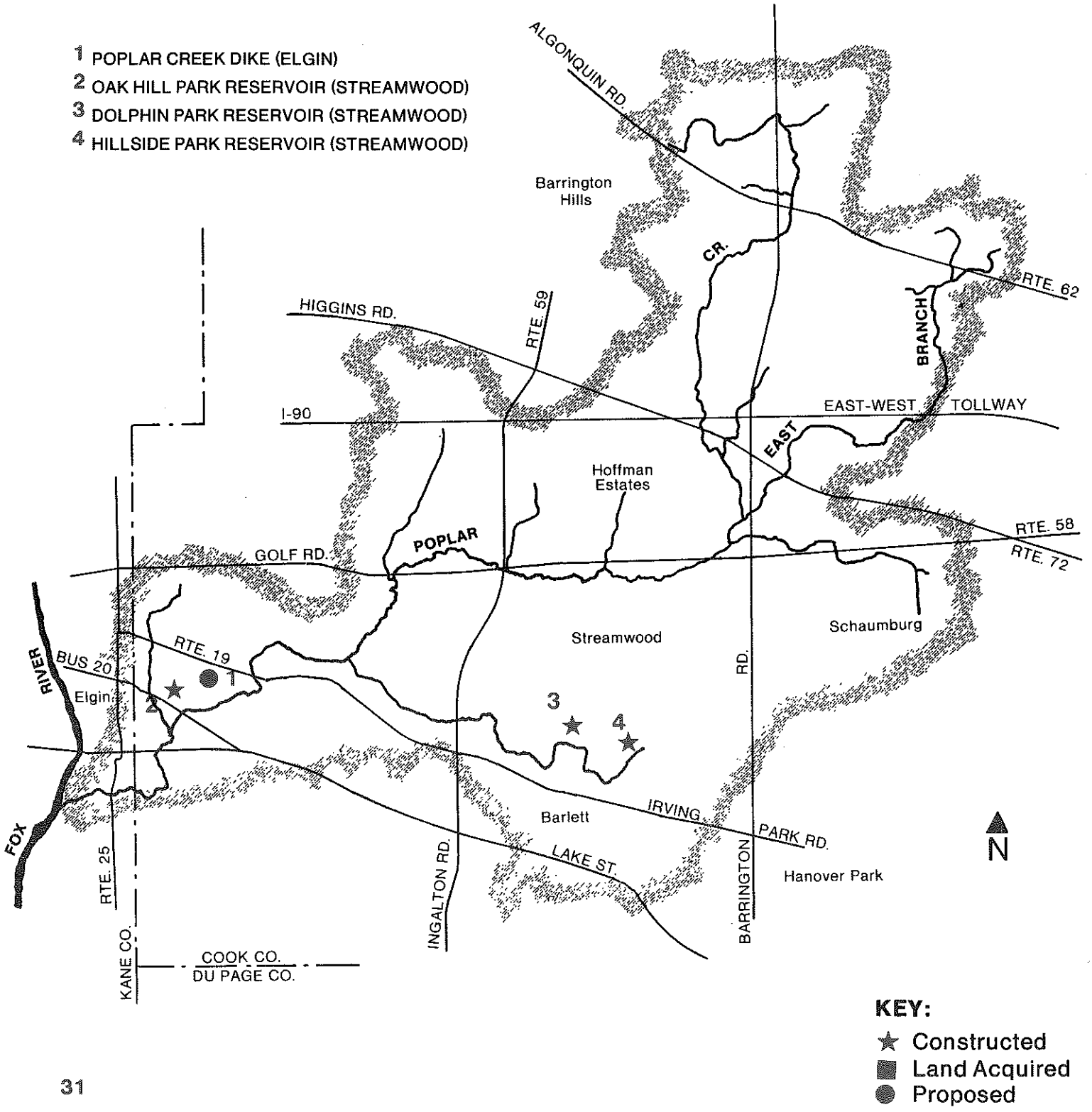
Among the study's objectives are flood control; floodplain management; wastewater management, including storm water runoff; regional water supply; water quality control; recreation; fish and wildlife conservation protection and enhancement of aesthetic qualities; and other measures for enhancement and protecton of the environment on streams in the basin area.

A preliminary feasibility report was completed by the Chicago District in fiscal year 1978. Detailed feasibility studies were started in fiscal year 1979 for those problem areas identified in the preliminary study as warranting further investigation.

Floodplain Regulations

The Illinois Division of Water Resources (DWR) has authority to regulate the floodplain throughout the Fox River Watershed. The Division uses the best available floodplain information to define those areas subject to flooding. Any construction proposed within flood prone areas must be permitted by the DWR and not significantly increase stage or flood damages.

Poplar Creek Watershed



Projects of Division of Water Resources

1 POPLAR CREEK DIKE
LENGTH: 1400 feet
BENEFITED AREA: 102 residential properties; 28 businesses; City of Elgin
COSTS: Construction - $219,000 Estimate (DWR)
Land - $70,000 Estimate (Elgin)

Projects of the Metropolitan Sanitary District

2 OAK HILL PARK RESERVOIR (Completed in 1976)
VOLUME: 77 acre-feet
BENEFITED AREA: Streamwood
COST: Construction - $346,000 (MSD)
34 acres of land donated by Village
Estimated value $340,000 (1976)
MAINTENANCE: Streamwood and Streamwood Park Dist.

3 DOLPHIN PARK RESERVOIR (Completed in 1976)
VOLUME: 96 acre feet
BENEFITED AREA: Streamwood
COST: Construction - $238,000 (MSD)
33 acres of land donated by Village
Estimated value $330,000 (1976)
MAINTENANCE: Streamwood and Streamwood Park Dist.

4 HILLSIDE PARK RESERVOIR (Completed in 1976)
VOLUME: 35 acre-feet
BENEFITED AREA: Streamwood
COST: Construction - $87,000 (MSD)
18 acres of land donated by Village
Estimated value $180,000 (1976)
MAINTENANCE: Streamwood and Streamwood Park Dist.

All estimated construction costs include engineering and administration and are updated to February 1981.

PROGRAM STATUS

Land Protection Program

Soil Erosion and Sedimentation Control Ordinances have been enacted throughout the Poplar Creek Watershed which includes Barrington Hills, South Barrington, Hoffman Estates, Schaumburg, Hanover Park, Streamwood, Bartlett, Elgin, Inverness, and unincorporated Cook County.

These ordinances will control erosion and sedimentation from developing areas in the watershed to assure that excessive sediment does not find its way into the storm water conveyance systems. The North Cook Soil and Water Conservation District is providing technical assistance to the communities. The land protection programs are currently being evaluated by the Conservation District to determine the effectiveness of each and to make recommendations for improving them if necessary.

Floodplain Regulations

The Illinois Division of Water Resources implemented a floodplain regulation use permit procedure for the entire watershed in 1976. Floodplain maps and profiles developed during the Poplar Creek PL 566 plan formulation by the Soil Conservation Service are used by the State in implementing the regulations. Any construction within the area designated as the floodplain must have a permit which requires that stages and velocities of flood flow are not significantly altered.

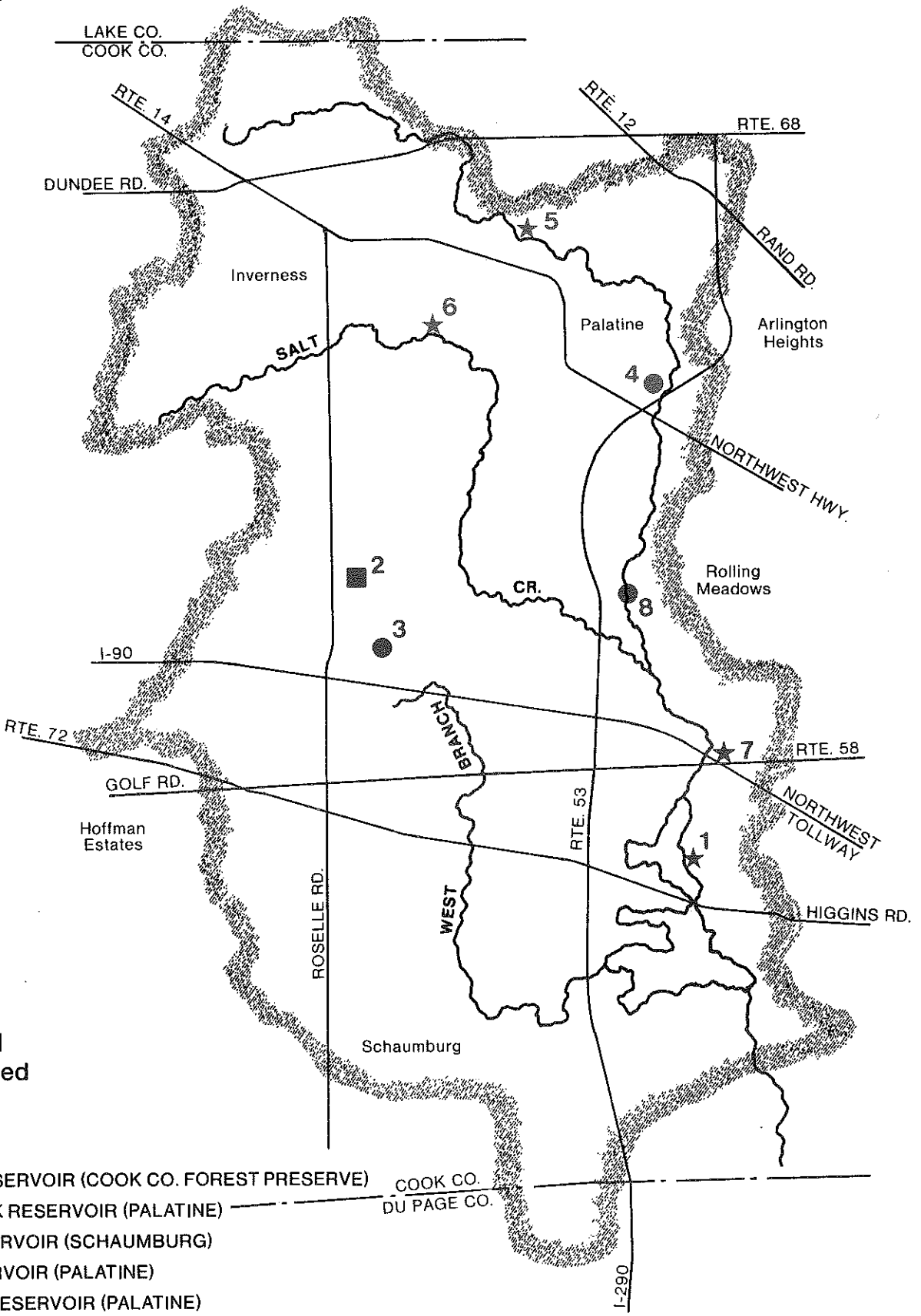
Channel Maintenance (Stream Preservation) Program

The Illinois Division of Water Resources is serving as lead agency for the development and coordination of a watershed wide stream preservation program. The proposed program will be ready for the watershed communities to implement by the end of 1981. The program will outline annual inspection and maintenance procedures.

Wetland and Open Space Acquisition

Communities in the Poplar Creek Watershed are actively acquiring and/or preserving open space and wetland to meet local needs. A green belt is planned to link municipalities with existing Cook County Forest Preserve District holdings. Approximately 435 acres of stream corridor is required for this need.

Upper Salt Creek Watershed



1 BUSSE WOODS RESERVOIR (COOK CO. FOREST PRESERVE)
2 UPPER SALT CREEK RESERVOIR (PALATINE)
3 PLUM GROVE RESERVOIR (SCHAUMBURG)
4 TWIN LAKES RESERVOIR (PALATINE)
5 TOM T. HAMILTON RESERVOIR (PALATINE)
6 MARGRETH RIEMER RESERVOIR (PALATINE)
7 REACH F, PHASE I (ROLLING MEADOWS)
8 REACH F, PHASE II AND III (ROLLING MEADOWS, ARLINGTON HEIGHTS)

Projects of the Soil Conservation Service

1 BUSSE WOODS RESERVOIR (Completed in 1978)
VOLUME: 7036 acre-feet
FLOOD PROTECTION TO: Elk Grove Village, Wood Dale, Addison, Villa Park
COST: Construction - $4,300,000 (DWR)
$2,075,000 (SCS)
Land provided by Cook County Forest Preserve District. Estimated value $14,000,000 (1974)
Recreation - $4,981,000 Estimate (SCS)
$3,108,000 Estimate (Cook County Forest Preserve District)
$1,873,000 Estimate (DWR)
MAINTENANCE: Cook County Forest Preserve District

2 PLUMGROVE RESERVOIR (STRUCTURE 2)
(To be constructed in 1982)
VOLUME: 297 acre-feet
FLOOD PROTECTION TO: Rolling Meadows, Schaumburg
COST: Construction - $696,000 Estimate (SCS)
$68,000 Estimate (MSD)
Land - $2,170,000 (MSD)
Recreation Estimate:
$64,000 (Palatine Park District)
$15,000 (Palatine Township)
$ 4,500 (Village of Palatine)
$83,500 (Illinois Department of Conservation)
MAINTENANCE: Palatine Park District and MSD

3 UPPER SALT CREEK RESERVOIR (STRUCTURE 3)
(To be constructed in 1984)
VOLUME: 405 acre-feet
FLOOD PROTECTION TO: Schaumburg, Rolling Meadows
COST: Construction - $2,000,000 Estimate (SCS)
Land - $3,600,000 Estimate (MSD)

4 TWIN LAKES RESERVOIR (STRUCTURE 4)
(To be constructed in 1985)
VOLUME: 499 acre-feet
FLOOD PROTECTION TO: Palatine, Arlington Heights Rolling Meadows
COST: Construction - $8,000,000 Estimate
Land - 32 acres by MSD
Estimated value $800,000 (1981)
47 acres by the Village of Palatine
Estimated value $1,175,000 (1981)

5 TOM T. HAMILTON RESERVOIR
(STRUCTURE 5 - Completed in 1981)
VOLUME: 537 acre-feet
FLOOD PROTECTION TO: Palatine, Arlington Heights
COST: Construction - $5,329,000 (SCS)
Land - $1,390,000 (MSD)
MAINTENANCE: Palatine Park District and MSD

6 MARGRETH RIEMER RESERVOIR
(STRUCTURE 6 - Completed in 1981)
VOLUME: 572 acre-feet
FLOOD PROTECTION TO: Palatine, Rolling Meadows
COST: Construction - $7,213,500 (SCS)
Land - $2,123,000 (MSD)
MAINTENANCE: Palatine Park District and MSD

7 REACH F PHASE I CHANNEL IMPROVEMENT
(Completed in 1981)
DESCRIPTION: Improve channel to enhance flows for 0.38 miles
FLOOD PROTECTION TO: Rolling Meadows
COST: Construction cost included in Busse Woods Reservoir Contract.
Land rights obtained by Division of Water Resources.

8 REACH F PHASE II AND PHASE III
CHANNEL IMPROVEMENT
DESCRIPTION: Enclose and improve channel for 1.5 miles from Carriage Way Bridge to Route 53
FLOOD PROTECTION TO: Rolling Meadows, Arlington Hts.
COST: Construction (Phase II) - $6,800,000 Est. (SCS)
(Phase III) - $1,000,000 Estimate (SCS)
Land rights to be obtained by Division of Water Resources.

All estimated construction costs include engineering and administration and are updated to 1981.

PROGRAM STATUS

Land Protection Program

Soil erosion and sedimentation control ordinances have been enacted in the Upper Salt Creek Watershed which includes the communities of Inverness, Hoffman Estates, Palatine, Rolling Meadows, Schaumburg, and unincorporated Cook County. These ordinances will control erosion losses from agricultural and developing areas in the watershed to assure that excessive sediment does not find its way into the storm water conveyance systems. The land protection programs are currently being evaluated by the North Cook Soil and Water Conservation District to determine the effectiveness of each and to make recommendations for improving them if necessary.

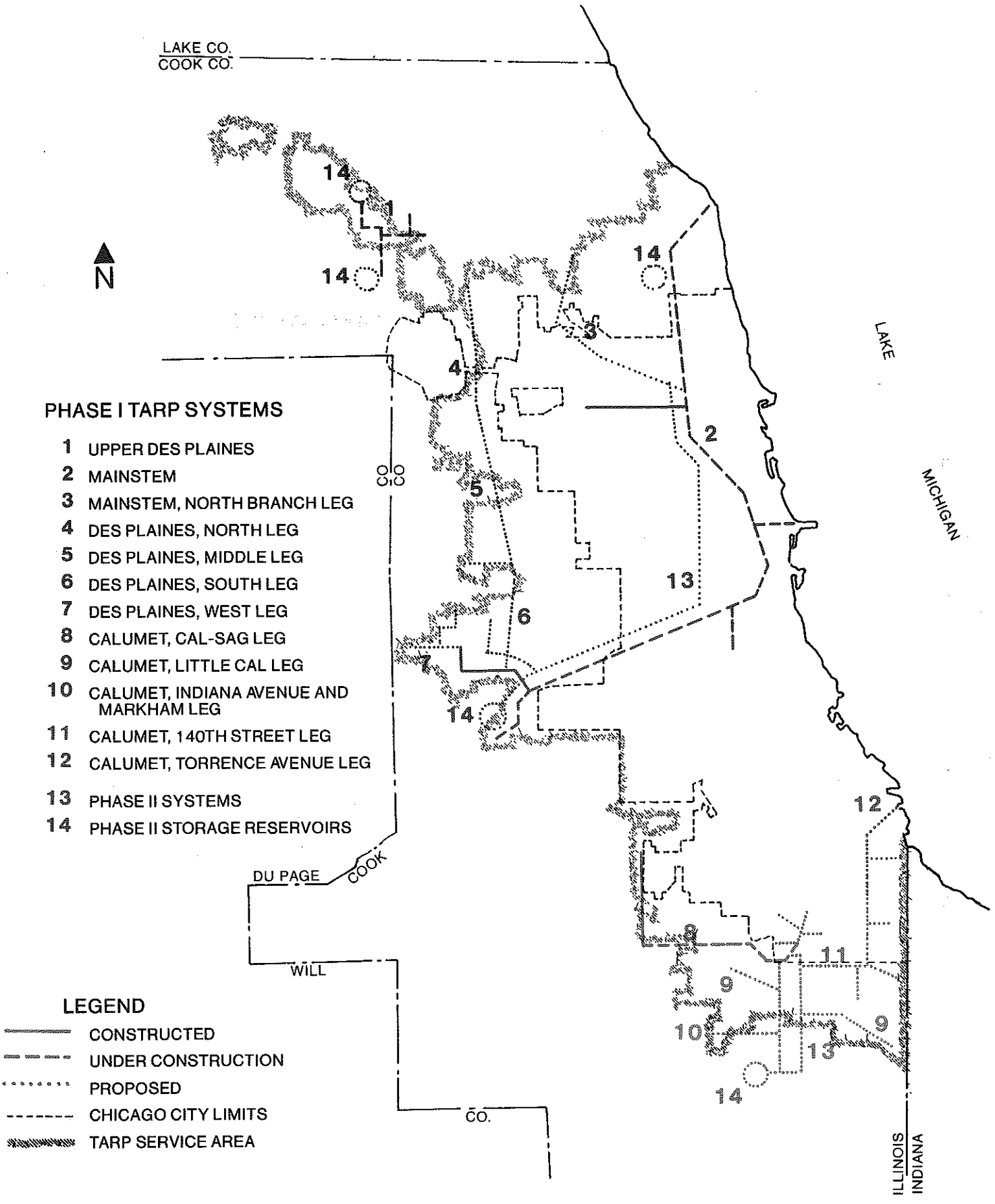
Channel Maintenance (Stream Preservation) Program

The Illinois Division of Water Resources is serving as lead agency for the development and coordination of a watershed-wide stream preservation program. The proposed program will be ready for the watershed communities to implement by the end of 1981. The program will outline annual inspection and maintenance procedures.

Floodplain Regulations

The Illinois Division of Water Resources implemented a floodplain regulation use permit procedure for the entire Upper Salt Creek Watershed in 1976. Floodplain maps and profiles used for the regulations were developed during plan formulation by the Soil Conservation Service. Any construction within the designated floodplain must have a permit which requires that flood water stages and velocities are not altered significantly.

Central Basin Watershed Tunnel and Reservoir



Projects of the Metropolitan Sanitary District

Tarp Phase I

1 UPPER DES PLAINES SYSTEM

TRIBUTARY AREA: 88.7 square miles
TOTAL TUNNEL LENGTH: 6.6 miles
STORAGE VOLUME: 2128 acre-feet
TOTAL CONSTRUCTION COST: $64,000,000

TOTAL MAINSTEM SYSTEM SUMMARY

TRIBUTARY AREA: 219.9 square miles
TOTAL TUNNEL LENGTH: 40.3 miles
STORAGE VOLUME: 3170 acre-feet
TOTAL CONSTRUCTION COST: $1,138,000,000

2 Mainstem TARP System

TUNNEL LENGTH: 31.2 miles
CONSTRUCTION COST: $975,000,000

3 North Branch Leg Mainstem TARP System

TUNNEL LENGTH: 9.1 miles
CONSTRUCTION COST: $163,000,000

4 DES PLAINES SYSTEM SUMMARY

TRIBUTARY AREA: 34.8 square miles
TOTAL TUNNEL LENGTH: 26.4 miles
STORAGE VOLUME: 1267 acre-feet
TOTAL CONSTRUCTION COST: $499,000,000

5 North Leg Des Plaines TARP System

TUNNEL LENGTH: 8.9 miles
CONSTRUCTION COST: $156,000,000

Middle Leg Des Plaines TARP System

TUNNEL LENGTH: 6.1 miles
CONSTRUCTION COST: $164,000,000

6 South Leg Des Plaines TARP System

TUNNEL LENGTH: 7.9 miles
CONSTRUCTION COST: $145,000,000

7 West Leg Des Plaines TARP System

TUNNEL LENGTH: 3.5 miles
CONSTRUCTION COST: $34,000,000

CALUMET SYSTEM SUMMARY

TRIBUTARY AREA: 90.8 square miles
TOTAL TUNNEL LENGTH: 36.3 miles
STORAGE VOLUME: 1638 acre-feet
TOTAL CONSTRUCTION COST: $565,000,000

8 Cal Sag Leg Calumet TARP System

TUNNEL LENGTH: 9.2 miles
CONSTRUCTION COST: $153,000,000

9 Little Cal Leg Calumet TARP System

TUNNEL LENGTH: 7.9 miles
CONSTRUCTION COST: $110,000,000

10 Indiana Avenue and Markham Leg, Calumet TARP System

TUNNEL LENGTH: 6.7 miles
CONSTRUCTION COST: $65,000,000

11 104th Street Leg, Calumet TARP System

TUNNEL LENGTH: 5.1 miles
CONSTRUCTION COST: $96,000,000

12 Torrence Avenue Leg, Calumet TARP System

TUNNEL LENGTH: 8.0 miles
CONSTRUCTION COST: $109,000,000

PROGRAM STATUS

TARP consists of two phases. Phase I of the Plan is primarily a water pollution control project. Phase II is associated primarily with urban flood control.

Phase I

Phase I of TARP consists of 110 miles of tunnels ranging in size between 9 feet and 33 feet in diameter constructed 150 to 350 feet below grade in solid rock. These tunnels will intercept combined wastewater from the 645 existing overflow relief outlets by means of 252 drop shafts and convey it to huge pumping stations which will deliver this wastewater to treatment plants. All wastewater will be treated prior to being discharged to the area's waterways. This will result in approximately 85 percent reduction in the total annual discharge of pollutants into the waterways. The estimated cost of Phase I is $2.26 billion. As phase I of TARP is primarily a pollution control project, the USEPA is providing grant funds for approximately 75 percent of the project cost.

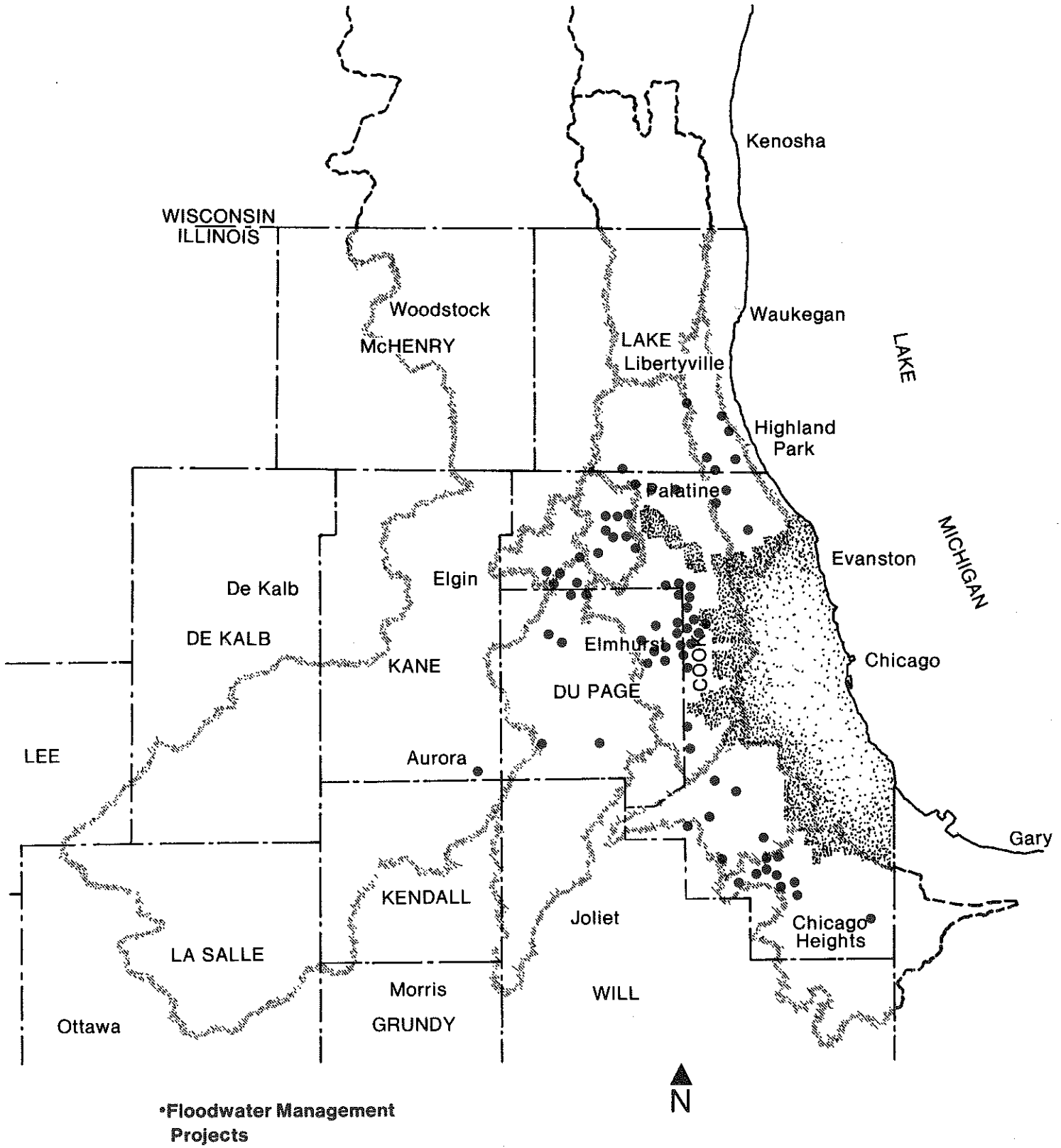
As of January 1, 1981, 53 percent of TARP Phase I projects have been awarded. The cost of projects under construction is $1.19 billion, of which $760 million have been paid out to the contractors for work performed. The remaining (unawarded) portion of TARP Phase I has been designed and is awaiting further appropriations of USEPA funds. The estimated cost of remaining TARP Phase I projects is $1.07 billion.

Phase II

The flood control benefits of TARP will be minimal until Phase II is operational. Phase II TARP consists of 21 additional miles of rock tunnels and three reservoirs with a total storage capacity of 127,550 acre-feet. During major storms, the discharge from the tunnels will be directed into the reservoirs for temporary storage and preliminary treatment followed by final treatment in the Sanitary District treatment plants.

Since Phase II is primarily a flood control project and not a pollution control project, authority for its implementation was assigned to the U. S. Army Corps of Engineers by Congress in 1976. Presently, further studies and cost evaluation are being conducted by the Corps of Engineers. Upon completion of the study, estimated to take two to four years, the decisions on Corps of Engineers involvement in funding the flood control aspects of the plan will be made.

Watersheds of the Chicago Metropolitan Area



•Floodwater Management Projects

Structural Program Summary by Watershed

		B North Branch Chicago River	C Lower Des Plaines Tributaries	D Cal-Sal Channel	E Little Calumet River	F DuPage River	G Fox River	H Poplar Creek	I Upper Salt Creek
Reservoirs-Volume in Acre-Feet	Planned	6,083	10,828	-	12,409	-	-	-	1,201
	Constructed	2,000	1,564	189	1,450	2,730	50	208	8,145
	Total	8,083	12,392	189	13,859	2,730	50	208	9,346
Channel Improvement-Length in Miles	Planned	-	6.53	-	3.87	0.32	-	0.27	1.50
	Constructed	-	0.38	13.22	0.70	3.83	1.33	-	0.38
	Total	-	6.91	13.22	4.57	4.15	1.33	0.27	1.88
Construction Costs-in $1,000's	Planned	32,778	71,598	-	40,809	1,300	-	219	28,694
	Constructed	6,731	25,627	4,600	5,359	3,103	914	617	18,918
	Total	39,509	97,225	4,600	46,168	4,403	914	890	47,612
Land Costs-in $1,000's	Planned	2,945	16,658	-	5,967	-	-	70	800
	Acquired	10,029	18,570	271	7,611	1,345	119	850	24,481
	Total	12,972	35,228	271	13,518	1,345	119	920	25,281
Total Costs-in $1,000's		52,481	132,453	5,142	59,746	5,748	1,033	1,810	72,893

Note: Floodwater Management activities in the Upper DesPlaines River Watershed (A) are non-structural and not included in the summary.

FLOOD CONTROL PROJECTS OF THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO

Metropolitan Sanitary District of Greater Chicago
Flood Control Section
666 North Lake Shore Drive
Chicago, Illinois 60611
(312) 751-5810

FLOOD CONTROL PROJECTS OF THE DIVISION OF WATER RESOURCES

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

FLOOD CONTROL PROJECTS OF THE P.L. 566 PROGRAM, SOIL CONSERVATION SERVICE

U.S. Department of Agriculture
Soil Conservation Service
Resource Coordination Staff
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

WATERSHED INFORMATION

Calumet-Sag Channel Watershed

Metropolitan Sanitary District of Greater Chicago Flood Control Section
666 North Lake Shore Drive
Chicago, Illinois 60611
(312) 751-5810

Fox River Watershed and DuPage River Watershed

U.S. Army Corps of Engineers
219 South Dearborn Street
Chicago, Illinois 60604
(312) 353-1240

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Little Calumet River Watershed

South Cook-Will County Soil and Water Conservation District
Joliet Field Office
100 Manhattan Road
Joliet, Illinois 60433
(815) 723-5078

Metropolitan Sanitary District of Greater Chicago
Flood Control Section
666 North Lake Shore Drive
Chicago, Illinois 60611
(312) 751-5810

Lower Des Plaines Tributaries Watershed

U.S. Department of Agriculture
Soil Conservation Service
Resource Coordination Staff
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Upper Des Plaines River Watershed

U.S. Department of Agriculture
Soil Conservation Service
Resource Coordination Staff
P.O. Box 455
Lisle, Illinois 60532
(312) 964-4660

North Branch Chicago River Watershed

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Lake County Forest Preserve District
2000 North Milwaukee Avenue
Libertyville, Illinois 60048
(312) 367-6640

Poplar Creek Watershed

U.S. Department of Agriculture
Soil Conservation Service
1675 Hicks Road, Suite E
Rolling Meadows, Illinois 60008
(312) 991-1189

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Upper Salt Creek Watershed

Metropolitan Sanitary District of Greater Chicago
Flood Control Section
666 North Lake Shore Drive
Chicago, Illinois 606ll
(312) 751-5810

U.S. Department of Agriculture
Soil Conservation Service
1675 Hicks Road, Suite E
Rolling Meadows, Illinois 60008
(312) 991-1189

MISCELLANEOUS PROGRAMS

Channel Maintenance (Stream Preservation) Program

Illinois Division of Water Resources
Northern Illinois Engineering Studies Unit
P.O. Box 475
Lisle, Illinois 60532
(312) 964-4660

Floodplain Regulations

Illinois Division of Water Resources
Bureau of Resource Management
Woodfield Plaza Building
1000 Plaza Drive
Schaumburg, Illinois 60196
(312) 884-4340

Floodproofing Information and Flood Insurance Program

Illinois Division of Water Resources
Local Flood Plain Programs Section
300 N. State Street, Room 1010
Chicago, Illinois 60610
(312) 793-3123

Land Protection Programs

South Cook-Will County Soil and Water Conservation District
Joliet Field Office
100 Manhattan Road
Joliet, Illinois 60433
(815) 723-5078

Lake County Soil and Water Conservation District
Libertyville Field Office
1641 N. Milwaukee Avenue, Suite 6
Libertyville, Illinois 60048
(312) 367-4069

North Cook Soil and Water Conservation District
Rolling Meadows Field Office
1675 Hicks Road, Suite E
Rolling Meadows, Illinois 60008
(312) 991-1189

Kane-DuPage Soil and Water Conservation District
St. Charles Field Office
545 Randall Road
St. Charles, Illinois 60174
(312) 584-7960

On-Site Storm Water Detention

Metropolitan Sanitary District of Greater Chicago
Local Sewer Section
666 North Lake Shore Drive
Chicago, Illinois 60611
(312) 751-5789

Tunnel and Reservoir Plan

Metropolitan Sanitary District of Greater Chicago
Tunnel and Reservoir Planning Section
666 North Lake Shore Drive
Chicago, Illinois 606ll
(312) 751-5794

Cooperating Agencies

Addison
Addison Creek Conservancy District
Alsip
Arlington Heights
Arlington Heights Park District
Bannockburn
Bellwood
Bloomingdale
Blue Island
Broadview
Brookfield
Buffalo Grove
Calumet City
Cal-Union Drainage District
Chicago Heights
Chicago Ridge
City of Chicago
Cook County
Cook County Forest Preserve District
Country Club Hills
Crete
Crestwood
Deerfield Park District
Des Plaines
Drainage District #2
DuPage County
DuPage County Forest Preserve District
East Chicago Heights
East Skokie Drainage District
Elgin
Elgin Sanitary District
Elk Grove
Elk Grove Park District
Elmhurst
Elmhurst Park District
Flossmoor
Franklin Park
Glenview
Glenwood
Gurnee
Hanover Park
Harvey
Hazelcrest
Hazelcrest Park District
Hickory Hills
Highland Park
Highland Park Park District
Hinsdale
Hoffman Estates
Homewood
Homewood-Flossmoor Park District
Itasca
Kane-DuPage Soil & Water Conservation District
Kenosha County, Wisconsin
Kenosha County, Wisconsin Soil & Water Conservation District
LaGrange
Lake Bluff
Lake County
Lake County Forest Preserve District
Lake County Soil & Water Conservation District
Lake Forest
Lansing
Lansing Park District
Libertyville
Lincoln-Lansing Drainage District
Lincolnshire
Long Grove
Lynwood
Lyons
Markham
Markham Park District
Matteson
Melrose Park
Metropolitan Sanitary District of Greater Chicago
Midlothian
Mt. Prospect
Niles
North Brook
North Chicago
North Cook Soil & Water Conservation District
North Skokie Drainage District
Northeastern Illinois Planning Commission
Northfield
Northlake
Oak Brook
Oak Forest
Oak Lawn
Olympia Fields
Orland Park
Palatine
Palatine Park District
Palos Heights
Palos Hills
Palos Park
Park Forest
Park Forest South
Prospect Heights
Richton Park
Riverdale
Riverside
Robbins
Rolling Meadows
Roselle
Salt Creek Rural Park District
Sauk Village
Schaumburg
Schaumburg Park District
Southeastern Wisconsin Regional Planning Commission
South Chicago Heights
South Holland
State of Illinois, Department of Conservation
State of Illinois, Division of Water Resources
State of Illinois, Water Survey
Steger
Streamwood
Thornton
Tinley Park
Tinley Park District
Union Drainage District #1, #2, and #4
U.S. Army Corps of Engineers
U.S. Department of Agriculture, Soil Conservation Service
Villa Park
West Skokie Drainage District
West Haven
Weller Creek Drainage District
Westchester
Western Springs
Wheeling
Wheeling Park District
Will County
Will County Forest Preserve District
Will South Cook Soil & Water Conservation District
Wilmette
Winnetka
Wood Dale
Wood Dale Park District
Worth