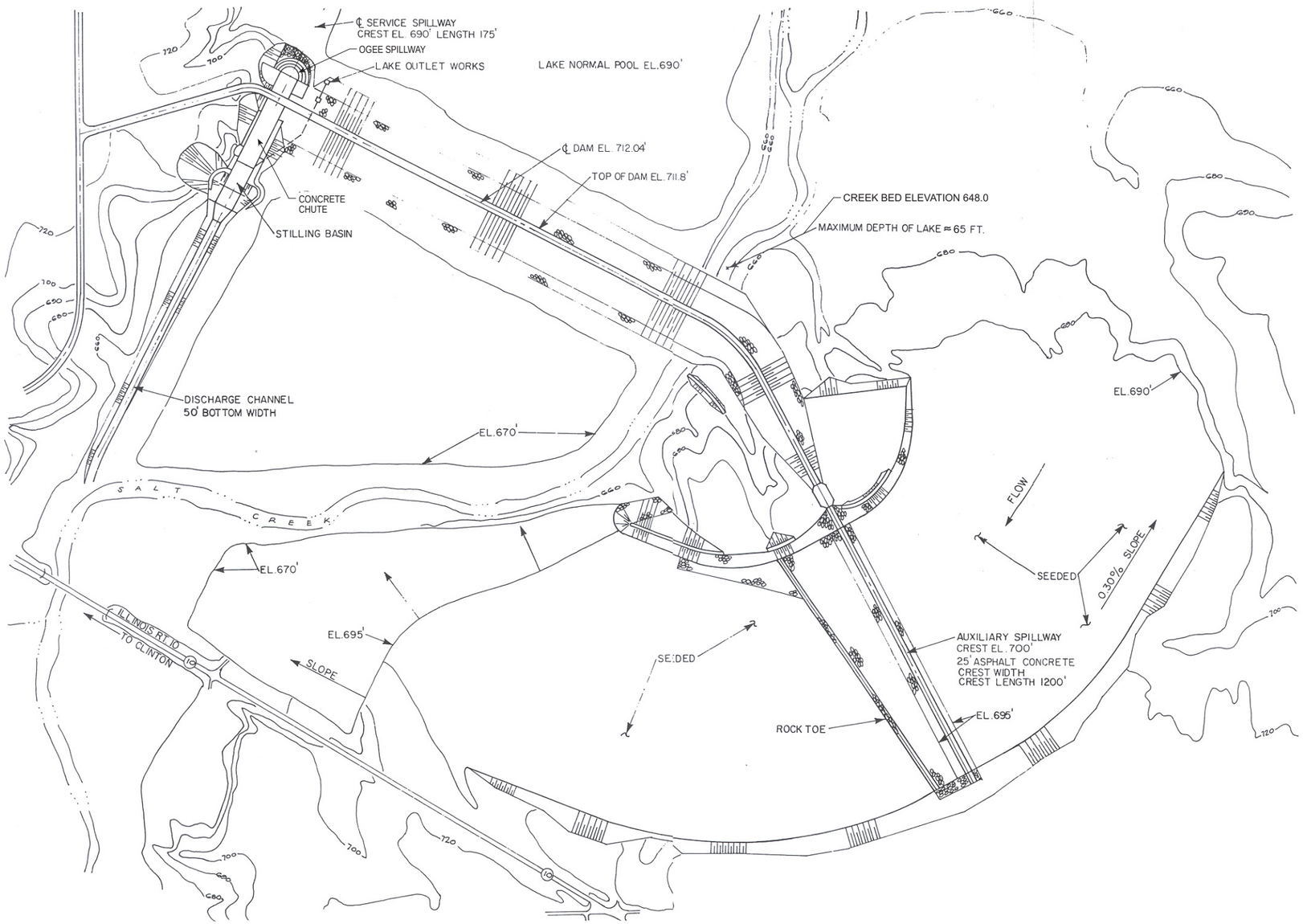
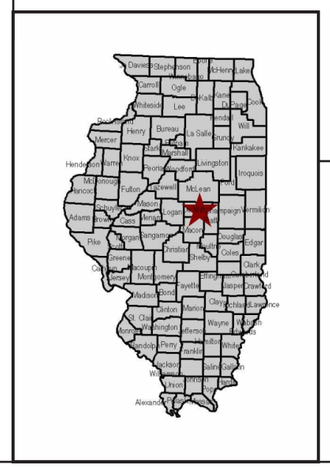
Site Safety Analysis Report for the EGC Early Site Permit

Figure 2.4-2
Plan of Main Dam, Spillways, and Outlet Works



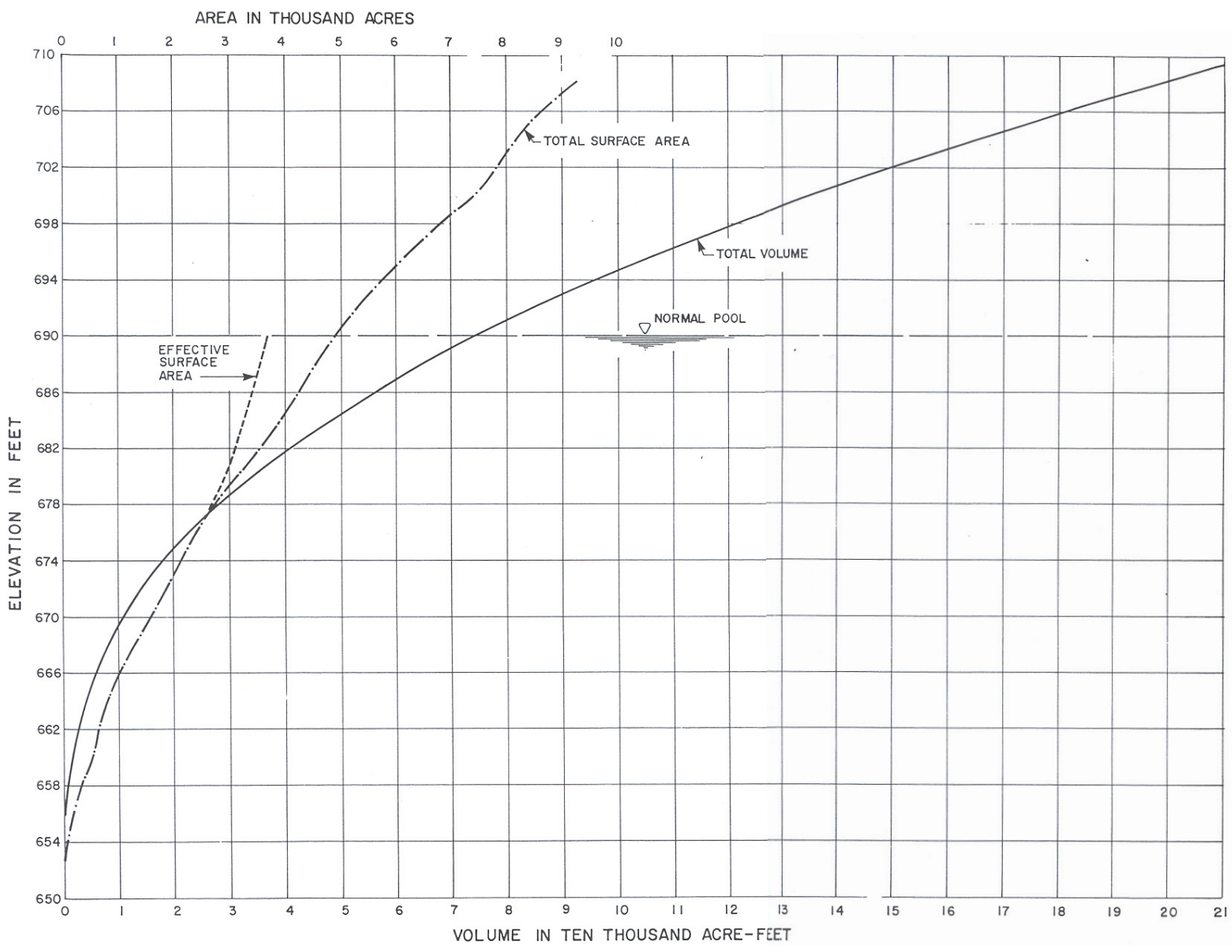
Legend

Data Source:
CPS, 1982



N

Not to Scale



ELEVATION IN FEET	AREA IN ACRES	CAPACITY IN ACRE-FEET
680	3,100	33,900
682	3,550	40,600
684	3,930	48,000
686	4,250	56,000
688	4,520	64,800
690	4,895	74,200
692	5,210	83,600
694	5,700	95,000
696	6,140	106,300
698	6,800	120,000
700	7,380	133,300
702	7,800	149,000
704	8,180	164,300
706	8,600	182,000
708	9,260	199,200

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Figure 2.4-3
Lake Elevation-Area Capacity Curves

Legend

— — — Effective Surface Area

—·—·— Total Surface Area

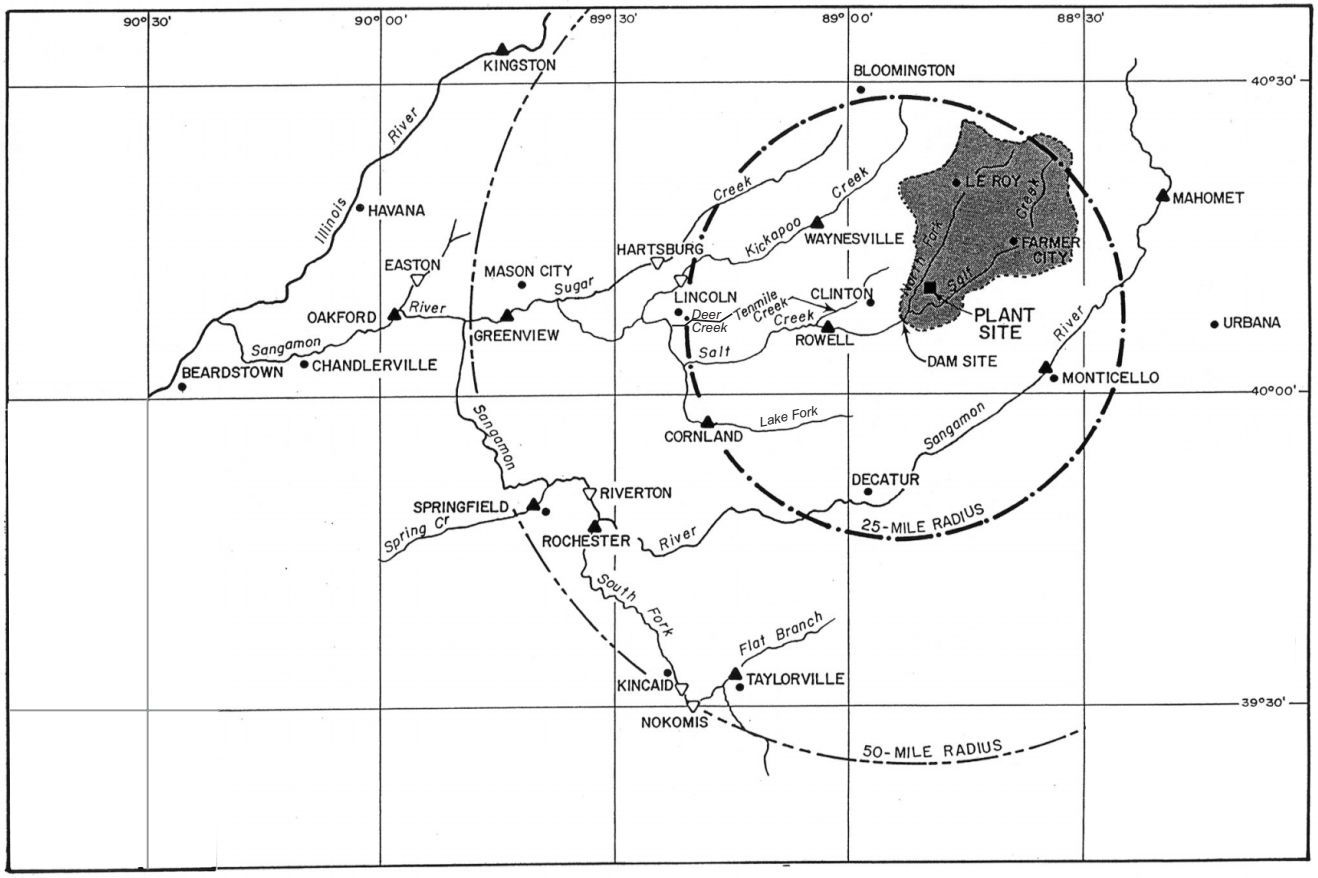
——— Total Volume

Data Source:
CPS, 1982

Not to Scale

Site Safety Analysis Report for the EGC Early Site Permit

Figure 2.4-4
Hydrologic Network Sangamon River Basin



Legend

- ▲ Recording Station
- ▽ Discontinued Station
- • Cities

Data Source:
CPS, 1982

N

Not to Scale

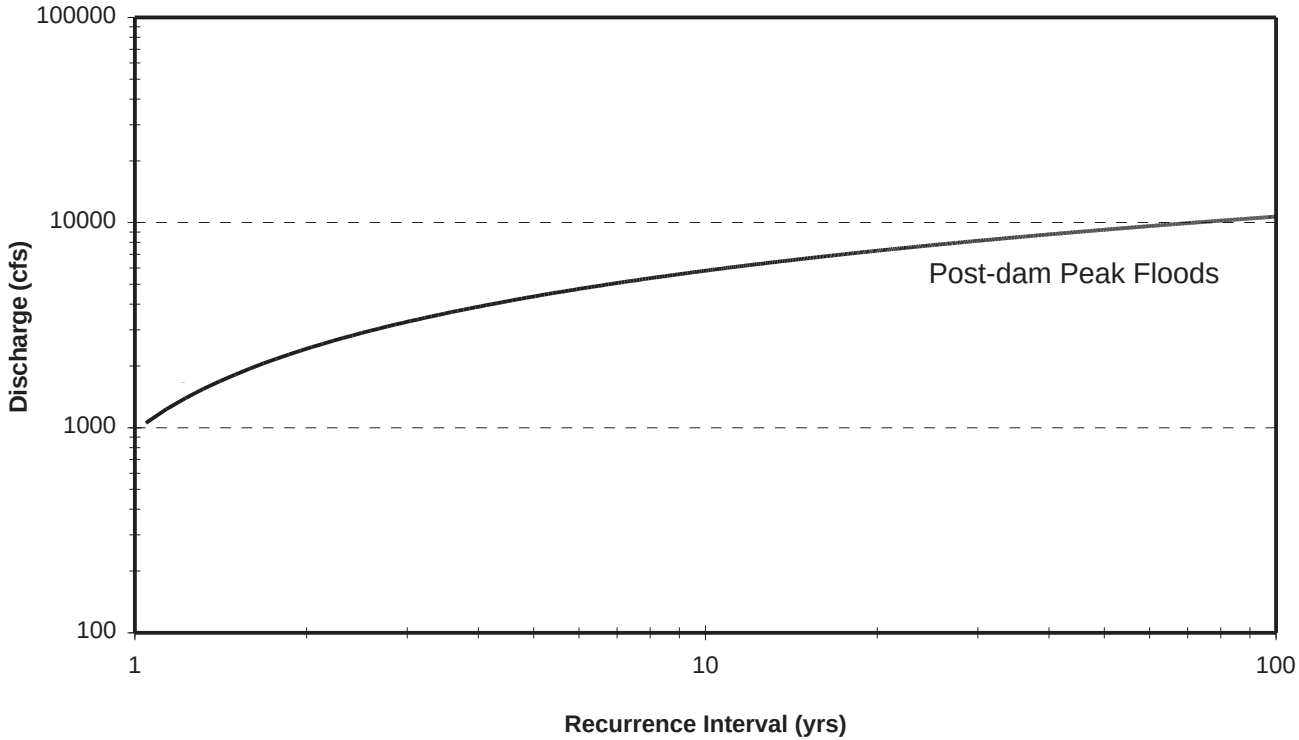


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Figure 2.4-5

Post-dam Peak Flood Magnitudes and Frequencies for Salt Creek at Rowell Gauge Station

Legend

Data Source:
USGS, 2002

Not to Scale

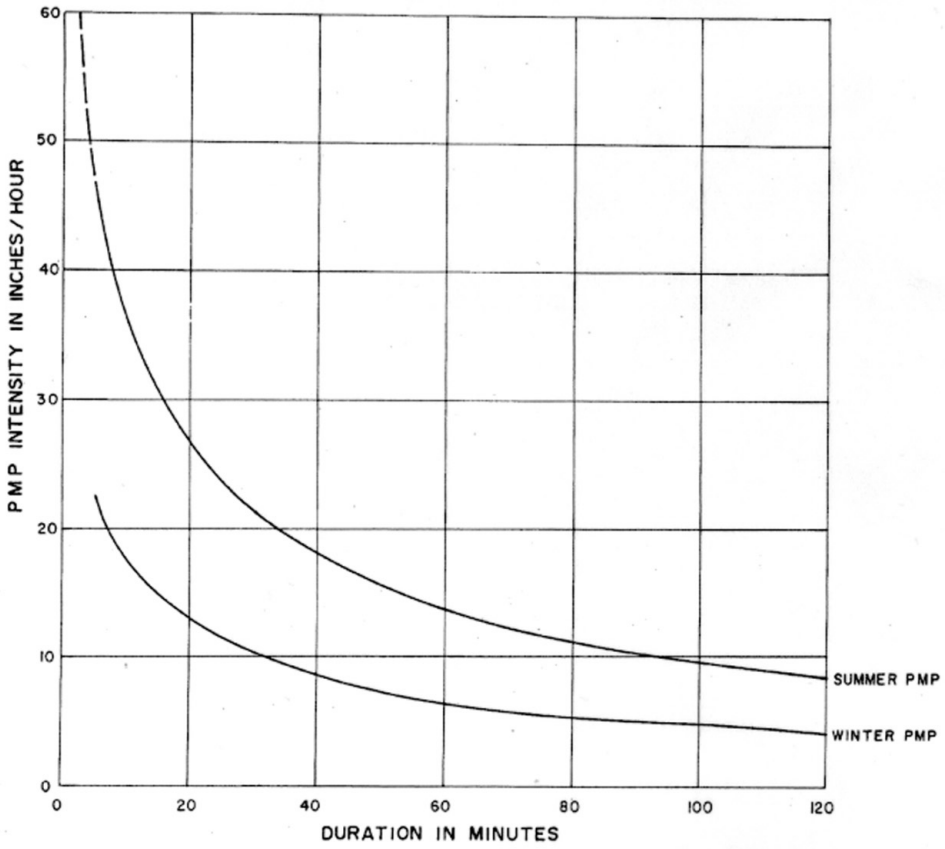

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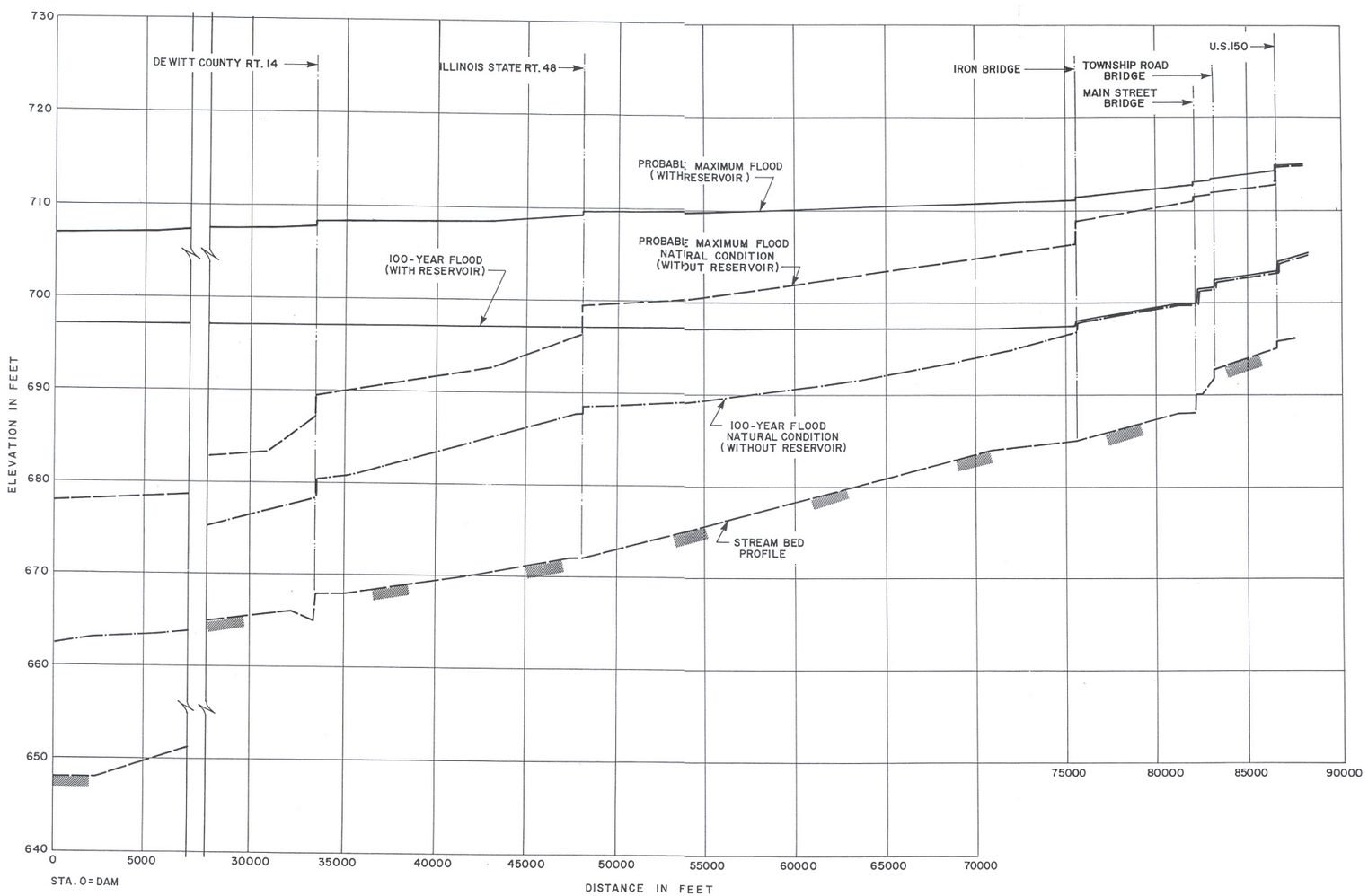
Figure 2.4-6

Summer and Winter PMP Intensity Duration Curves

Legend

Data Source
CPS, 2002

Not to Scale



Site Safety Analysis Report for the EGC Early Site Permit

Figure 2.4-7
Water Surface Profiles
Salt Creek

Legend

Data Source:
CPS, 1982

Not to Scale

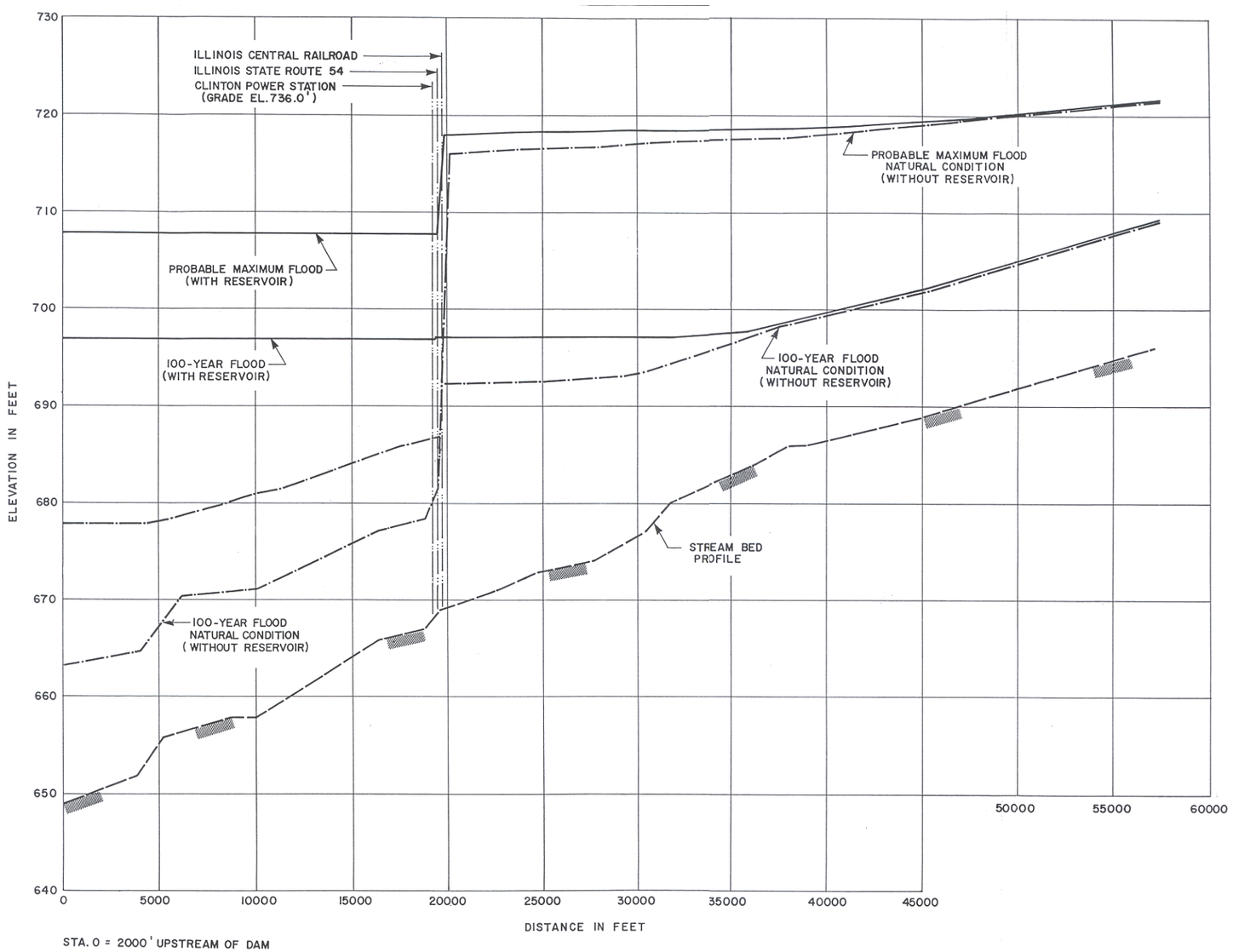


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Figure 2.4-8

Water Surface Profiles of North Fork Salt Creek

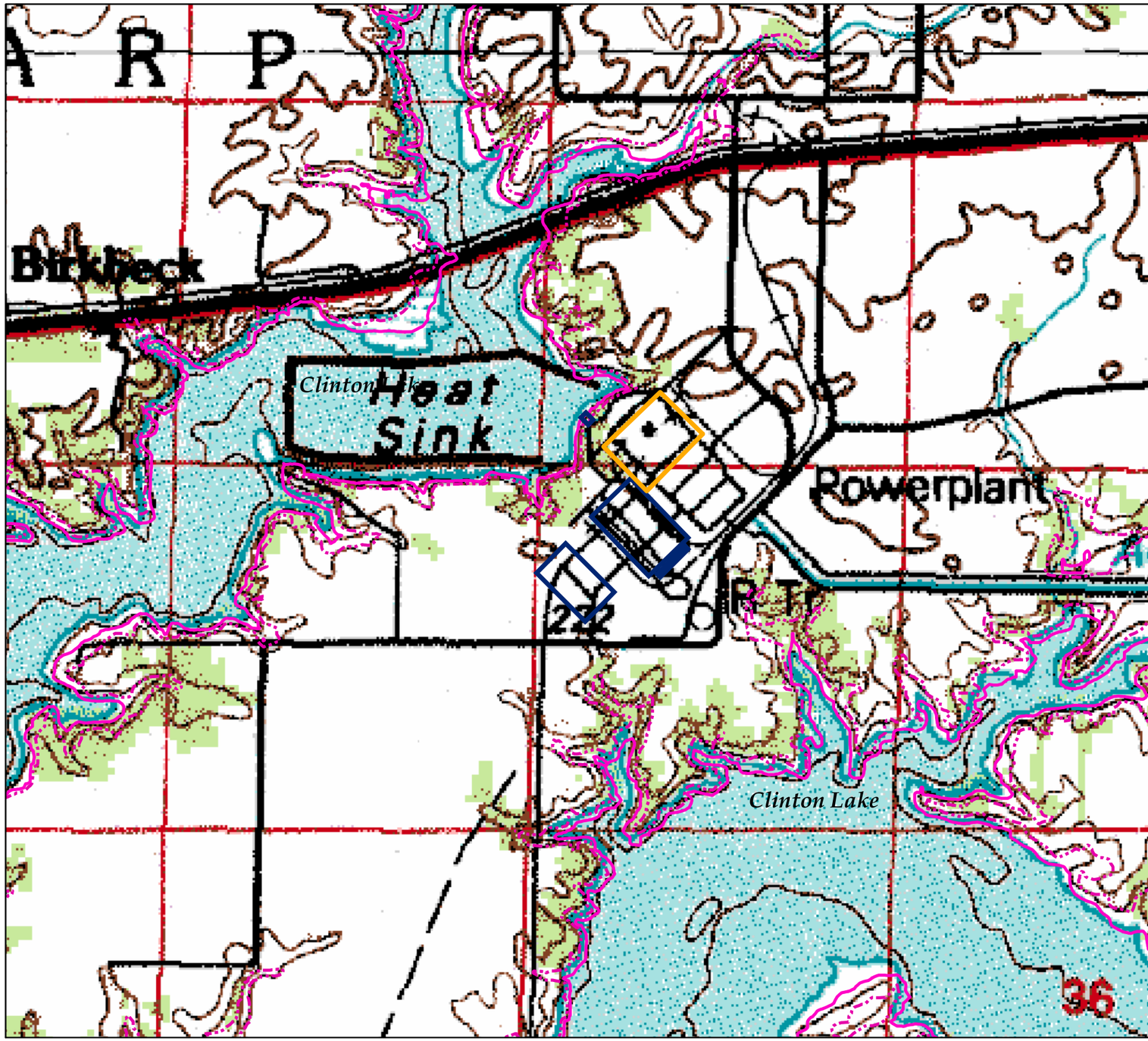
Legend

Data Source:
CPS, 1982

Not to Scale

Site Safety Analysis Report for the EGC Early Site Permit

Figure 2.4-9
Flood Prone Area



Legend

- CPS Facility
- Proposed Areas for EGC ESP Facility Structures
- 100-year Flood Zone Boundary
- Probable Maximum Flood Zone Boundary (708.9 ft)

Note: The Probable Maximum Flood Zone Boundary and the 100-year Flood Zone Boundary were derived form USGS National Digital Elevation Model Data. The Probable Maximum Flood Elevation is 708.9 ft (216 m). The 100-year flood is 697 ft (212 m). Variations in mapping accuracy between the map base and the flood boundaries derived from the USGS Digital Elevation Model are apparent in locations on the map.

Data Sources:
USGS, 1984 and 1989
USGS, 1999
ISWS, 1996
CPS, 2002

N

0 1,000 2,000 4,000 Feet

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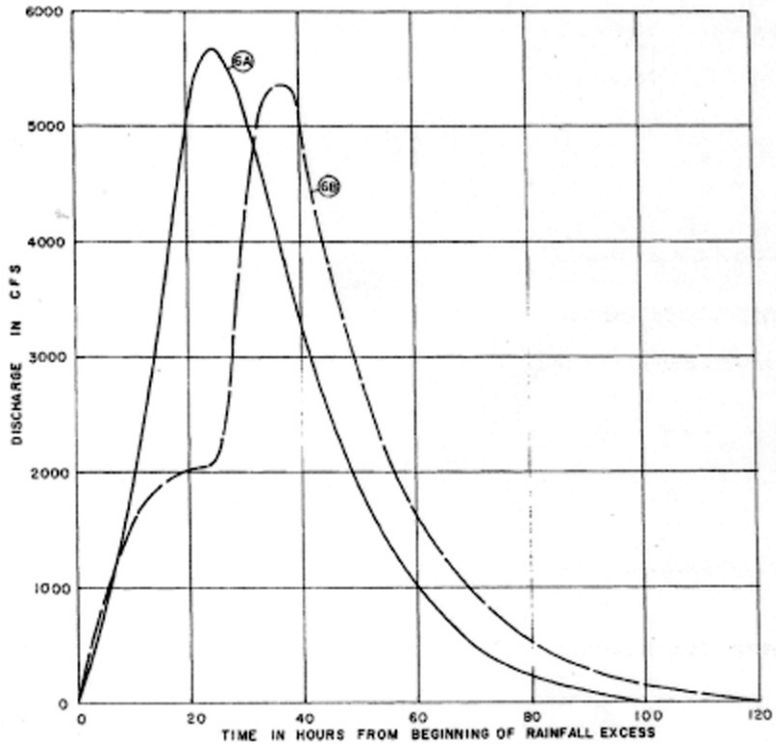
Figure 2.4-10

Unit Hydrographs for Salt Creek at Dam Site Under Natural River Conditions



UNIT GRAPH DESIGNATION	UNIT DURATION HOURS	LOCATION	DRAINAGE AREA SQ.-MILES	REMARKS
6A	2	DAM SITE	296	DERIVED FROM SYNTHETIC METHOD IN "UNIT HYDROGRAPHS IN ILLINOIS" BY W. D. MITCHELL
6B	2	DAM SITE	296	DERIVED FROM ROWELL STATION UNIT HYDROGRAPH ADJUSTED BY AREA RATIO OF 296/334 (FROM "UNIT HYDROGRAPHS IN ILLINOIS" BY W. D. MITCHELL

Legend

Data Source
CPS, 2002

Not to Scale

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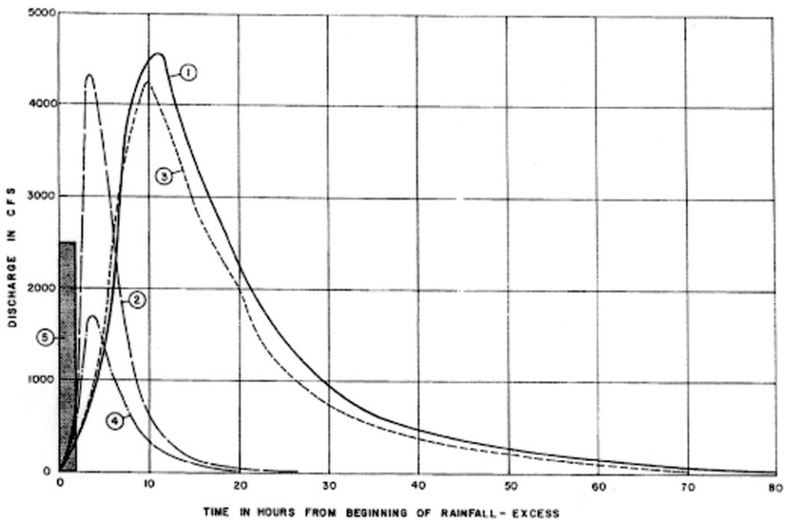
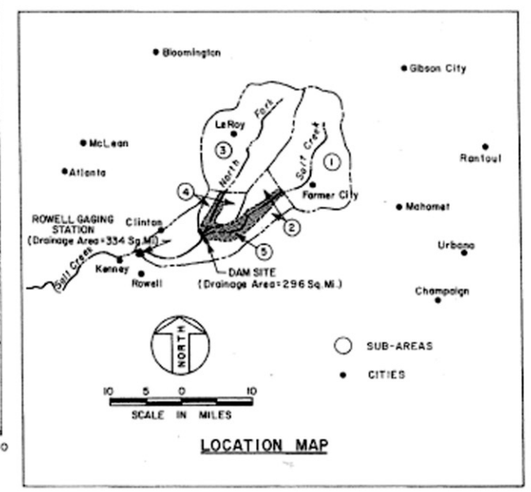
Figure 2.4-11
Unit Hydrographs for Sub-Basin Areas

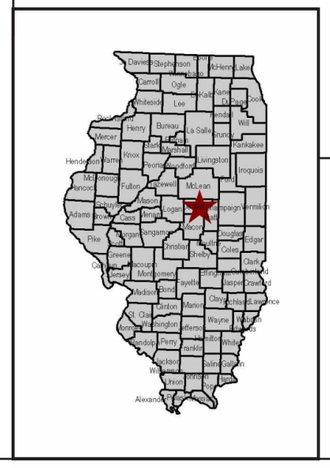




UNIT GRAPH NO.	UNIT DURATION HOURS	AREA REPRESENTED IDENTIFICATION	AREA REPRESENTED SQ.MI.	REMARKS
1	2	SUB-AREA 1	126	BASIN ABOVE HEAD OF SALT CREEK FINGER
2	2	SUB-AREA 2	36	LOCAL AREA OF SALT CREEK FINGER
3	2	SUB-AREA 3	111	BASIN ABOVE HEAD OF NORTH FORK FINGER
4	2	SUB-AREA 4	15	LOCAL AREA OF NORTH FORK FINGER
5	2	SUB-AREA 5	8	RESERVOIR SURFACE AREA

Legend

Data Source
CPS, 2002



N

Not to Scale