FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 4 OF 12

COOK COUNTY, ILLINOIS

AND INCORPORATED AREAS

*See Table 1: Listing of NFIP Jurisdictions for a complete listing of the communities represented in this Flood Insurance Study Report.

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Flood Insurance Rate Map (FIRM)

5.3 Coastal Analyses

For the areas of Cook County that are impacted by coastal flooding processes, coastal flood hazard analyses were performed to provide estimates of coastal BFEs. Coastal BFEs reflect the increase in water levels during a flood event due to storm surge as well as overland wave effects.

The following subsections provide summaries of how each coastal process was considered for this FIS Report. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation (STARRII 2017). Table 14 summarizes the methods and/or models used for the coastal analyses. Refer to Section 2.5.1 for descriptions of the terms used in this section.

Table 14: Summary of Coastal Analyses

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis was Completed
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Lakewide Storm Surge	Advanced Circulation Model (ADCIRC)	4/1/2017
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Lakewide Wave Generation	Simulating Waves Nearshore Models (SWAN)	4/1/2017
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Coastal Erosion	Cross-Shore Numerical Model (CSHORE)	4/1/2017
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Structure Failure Analysis	FEMA Guidance for Flood Risk Analysis and Mapping – Coastal Structures	4/1/2017

Table 14: Summary of Coastal Analysis (continued)

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis was Completed
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Statistical Analyses	GPD with Q-Q Optimization	4/1/2017
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Wave Setup	Direct Integration Method (DIM)	4/1/2017
Lake Michigan	From the county boundary between Lake County IL and Lake County IN	From the county boundary between Lake County IL and Lake County IN	Wave Runup	Stockdon, Van Gent, and Shore Protection Manual (SPM)[1]	4/1/2017

[1]U.S. Army Corps of Engineers (USACE) Shore Protection Manual (SPM). (USACE, 1984)

5.3.1 Stillwater Elevations

The stillwater elevations for the 1-percent annual chance flood were determined for areas subject to coastal flooding. The models and methods that were used to determine storm surge and wave setup are listed in Table 14. The stillwater elevation that was used for each transect in the coastal analyses is shown in Table 16, "Coastal Transect Parameters." Figure 8 shows an example of the stillwater elevations for the 1-percent annual chance flood that was determined for this coastal analysis; wave setup is computed at each transect location and added to the stillwater elevation to determine a total stillwater elevation.

Stillwater elevations and starting wave conditions for Cook County were determined from the lake-wide wave and storm surge study conducted for Lake Michigan by FEMA and Strategic Alliance for Risk Reduction (STARR) (FEMA, 2016). The study was performed using the coupled SWAN + ADCIRC hydrodynamic and wave model on a mesh of 1,045,141 nodes and validated using water levels and waves for six historical storms. The model was then used to simulate 150 selected historic storms based on historic peak water levels and peak wave heights. When available, ice coverage was accounted for in validation and production events. The modeled data were used to create a history of water elevation and wave height records from which the 10-, 2-, 1-, and 0.2-percent annual chance of exceedance elevations were calculated.

Figure 8: 1-Percent Annual Chance Stillwater Elevations for Coastal Areas

Storm Surge Statistics

Storm surge is modeled based on characteristics of actual storms responsible for significant coastal flooding. The characteristics of these storms are typically determined by statistical study of the regional historical record of storms or by statistical study of water level stations.

When historic records are used to calculate storm surge, characteristics such as the strength, size, track, etc., of storms are identified by site. Storm data was used in conjunction with numerical hydrodynamic models to determine the corresponding storm surge levels. An extreme value analysis was performed on the storm surge modeling results to determine a stillwater elevation for the 1-percent annual chance event.

In an oceanic environment water level stations can be used instead of historic records of storms when the available station record for the area represents both the astronomical tide component and the storm surge component. Great Lakes studies rely on water level stations to identify the highest water level storm events from the historic record. The selected storms are then used to simulate storm surge and wave heights across the study area. Table 15 provides the water level station name, managing agency, station type, station identifier, start date, end date, and statistical methodology applied to each station to determine the stillwater elevations.

Table 15: Water Level Station Analysis Specifics

Station Name	Managing Agency of Station	Station Type	Start Date[1]	End Date[1]	Statistical Methodology
Mackinaw City, MI (9075080)	National Oceanic and Atmospheric Administration (NOAA)	Water Level	1960	2009	N/A
Ludington, MI (9087023)	NOAA	Water Level	1960	2009	N/A
Holland, MI (9087031)	NOAA	Water Level	1960	2009	N/A
Calumet Harbor, IL (9087044)	NOAA	Water Level	1960	2009	N/A
Milwaukee, WI (9087057)	NOAA	Water Level	1960	2009	N/A

[1]Available data within study period of record (1960-2009); Prior to 1970, only monthly measured data is available.

Table 15: Water Level Station Analysis Specifics (continued)

Station Name	Managing Agency of Station	Station Type	Start Date[1]	End Date[1]	Statistical Methodology
Kewaunee, WI (9087068)	NOAA	Water Level	1973	2009	N/A
Sturgeon Bay, WI (9087072)	NOAA	Water Level	1960	2009	N/A
Green Bay, WI (9087079)	NOAA	Water Level	1960	2009	N/A
Port Inland, MI (9087096)	NOAA	Water Level	1964	2009	N/A

[1]Available data within study period of record (1960-2009); Prior to 1970, only monthly measured data is available

.

For each return period, the stillwater elevation at each node was used to create a raster surface using ArcInfo geoprocessing tools. The storm surge modeling was performed with elevation data referenced to the long term low water datum. At the time of this study, the low water datum for Lake Michigan was 577.6 feet NAVD88 or 577.5 feet International Great Lakes Datum of 1985 (IGLD85). The node or point data was converted to the vertical datum of NAVD88 (from IGLD85).

5.3.2 Waves

Starting wave heights and wave periods for Cook County were determined from the lake-wide wave and storm surge study conducted for Lake Michigan by FEMA and STARR (FEMA, 2016) as described in Section 5.3.1. The modeled data were used to create a history of wave height and wave period records which was used to determine starting wave conditions for the transect analysis.

Wave Setup Analysis

Wave setup was computed based on the wave and water level modeling results through the methods and models listed in Table 14. To adequately capture the complex hydrodynamics of wave-breaking across the surf zone, wave setup was calculated at each transect using the Direct Integration Method (DIM).

5.3.3 Coastal Erosion

A single storm episode can cause extensive erosion in coastal areas. Storm-induced erosion was evaluated using the methods listed in Table 14 to determine the modification to existing topography that is expected to be associated with coastal flooding events. The post-event eroded profile was used for the subsequent transect-based onshore wave hazard analyses.

5.3.4 Wave Hazard Analyses

Overland wave hazards were evaluated to determine the combined effects of ground elevation, vegetation, and physical features on overland wave propagation and wave runup. These analyses were performed at representative transects where waves are expected to be present during the floods of the selected recurrence intervals. The results of these analyses were used to determine elevations for the 1-percent annual chance flood. The transect analysis was performed with elevations in the vertical datum of IGLD85 and ultimately converted to NAVD88 for mapping.

Transect locations were chosen with consideration given to the physical land characteristics as well as development type and density so that they would closely represent conditions in their locality. Additional consideration was given to changes in the total stillwater elevation. Transects were spaced close together in areas of complex topography and dense development or where total stillwater elevations varied. In areas having more uniform characteristics, transects were spaced at larger intervals. Transects shown in Figure 9, "Transect Location Map," are also depicted on the FIRM. Table 16 provides the location, stillwater elevations, and total water elevations for all coastal analysis transects. Starting wave conditions are also provided for each transect evaluated for overland wave hazards. In this table, "starting" indicates the parameter value at the beginning of the transect.

Wave Height Analysis

Wave height analyses were performed to determine wave heights and corresponding wave crest elevations for the areas inundated by coastal flooding and subject to overland wave propagation hazards. Refer to Figure 7b for a schematic of a coastal transect evaluated for overland wave propagation hazards.

The methodology for analyzing the effects of wave heights associated with coastal storm surge flooding is described in a report prepared by the National Academy of Sciences (NAS). This method is based on three major concepts. First, depth-limited waves in shallow water reach maximum breaking height that is equal to 0.78 times the stillwater depth. The wave crest is 70 percent of the total wave height above the stillwater level. The second major concept is that wave height may be diminished by dissipation of energy due to the presence of obstructions, such as sand dunes, dikes and seawalls, buildings and vegetation. The amount of energy dissipation is a function of the physical characteristics of the obstruction and is determined by procedures prescribed in the NAS Report. The third major concept is that wave height can be regenerated in open fetch areas due to the transfer of wind energy to the water. This added energy is related to fetch length and depth.

Along each transect, wave heights and wave crest elevations were computed considering the combined effects of changes in ground elevation, vegetation, and physical features. The joint probability method (JPM) is used to compute five theoretical combinations of wave and water level conditions that have a joint 1-percent-annual-chance probability of occurrence. These theoretical combinations were simulated to determine the water levels, which include wave setup, and wave conditions at the shoreline. Wave heights and wave crest elevations were modeled using the methods and models listed in Table 14.

Wave Runup and Overtopping Analysis

Wave runup is the uprush of water caused by wave action on a shore barrier exceeding the total stillwater level. As part of the coastal study, an evaluation of wave runup is conducted to determine the total water elevation due to storm surge, wave setup, and wave runup, and whether that total water elevation is the dominant coastal flood hazard for an area. Wave runup is evaluated for areas having dune barrier systems, coastal bluffs, as well as sloped and vertical structures. Structures that are not certified to withstand the 1-percent-annual-chance flood event were analyzed in both the intact and failed conditions. Failed structure geometries were calculated using the methods and models listed in Table 14.

Wave runup elevations were calculated for each coastal transect using the methods and models listed in Table 14, which follow the FEMA Guidelines and Specifications. For gently sloping shorelines (slopes less than 1:10), the Stockdon equations were applied (Stockdon et al., 2006). For steeper (but non-vertical) sloping shorelines, the van Gent method was performed (van Gent, 2001). For vertical structures, runup elevations were determined using the guidance in Figure D-14 of the FEMA Guidelines and Specifications obtained from the Shore Protection Manual (SPM) (USACE, 1984). The SPM results in a mean wave runup value, which was multiplied by 2.2 to obtain the 2-percent runup height.

Wave overtopping occurs when the potential wave runup elevation is greater than the topographic feature crest elevation. The overtopping rate will depend on the incident water level and wave conditions, the barrier geometry and roughness characteristics, and the upland slope. Overtopping rates were calculated using the methods and models listed in Table 14, which follow the FEMA Guidelines and Specifications.

Wave overtopping behavior is determined based on the slope landward of the barrier crest. Where the shoreline geometry is characterized by a low-crested bluff or structure backed by a positively-sloping, nearly level upland, the Plateau Method was applied to calculate an adjusted runup elevation and the inland extent of runup. Where the shoreline geometry is characterized by a negative slope landward of the barrier crest, the overtopping water will result in sheet flow on the negative slope and may propagate until it reaches another flooding source or ponding area.

Table 16: Coastal Transect Parameters

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	1	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.1
Lake Michigan	2	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	591.9
Lake Michigan	3	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.2
Lake Michigan	4	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.4
Lake Michigan	5	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.4
Lake Michigan	6	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	589.8
Lake Michigan	7	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	593.0
Lake Michigan	8	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	588.2
Lake Michigan	9	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	589.4

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[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	10	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.8
Lake Michigan	11	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	591.4
Lake Michigan	12	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.6
Lake Michigan	13	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.0
Lake Michigan	14	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	588.5
Lake Michigan	15	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	591.2
Lake Michigan	16	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	587.7
Lake Michigan	17	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	587.7
Lake Michigan	18	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	588.3

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	19	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.7
Lake Michigan	20	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.9
Lake Michigan	21	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.9
Lake Michigan	22	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.7
Lake Michigan	23	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	587.7
Lake Michigan	24	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	588.2
Lake Michigan	25	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	587.5
Lake Michigan	26	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.5
Lake Michigan	27	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.6

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	28	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	588.0
Lake Michigan	29	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.0
Lake Michigan	30	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	591.1
Lake Michigan	31	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.1
Lake Michigan	32	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	592.4
Lake Michigan	33	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	594.5
Lake Michigan	34	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.9
Lake Michigan	35	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	590.6
Lake Michigan	36	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	592.5

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	37	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	587.2
Lake Michigan	38	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.1
Lake Michigan	39	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	589.3
Lake Michigan	40	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	591.1
Lake Michigan	41	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.5
Lake Michigan	42	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.0
Lake Michigan	43	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.4
Lake Michigan	44	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.6
Lake Michigan	45	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.8

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	46	N/A	N/A	582.5 582.5-582.5	582.9 582.9-582.9	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	587.5
Lake Michigan	47	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.6
Lake Michigan	48	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.2
Lake Michigan	49	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	587.4
Lake Michigan	50	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	589.2
Lake Michigan	51	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	591.9
Lake Michigan	52	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	598.2
Lake Michigan	53	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	597.2
Lake Michigan	54	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	596.6

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	55	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.1
Lake Michigan	56	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.1
Lake Michigan	57	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	587.0
Lake Michigan	58	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	589.8
Lake Michigan	59	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.1
Lake Michigan	60	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	591.3
Lake Michigan	61	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	591.8
Lake Michigan	62	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.3
Lake Michigan	63	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.4

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	64	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	588.6
Lake Michigan	65	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.9
Lake Michigan	66	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	588.0
Lake Michigan	67	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	590.7
Lake Michigan	68	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	590.9
Lake Michigan	69	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	590.0
Lake Michigan	70	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	589.1
Lake Michigan	71	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	591.0
Lake Michigan	72	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.5

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Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	73	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	591.6
Lake Michigan	74	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.6
Lake Michigan	75	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.6
Lake Michigan	76	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	591.9
Lake Michigan	77	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	587.4
Lake Michigan	78	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	591.3
Lake Michigan	79	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.6
Lake Michigan	80	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.6
Lake Michigan	81	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	592.4

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.
[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	82	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	590.9
Lake Michigan	83	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	588.5
Lake Michigan	84	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.7 583.7-583.7	589.3
Lake Michigan	85	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	592.0
Lake Michigan	86	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	587.2
Lake Michigan	87	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	588.9
Lake Michigan	88	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	583.7 583.7-583.7	586.8
Lake Michigan	89	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	586.6
Lake Michigan	90	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	596.4

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.
[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	91	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6–583.6	583.9 583.9-583.9	586.4
Lake Michigan	92	N/A	N/A	582.9 582.9-582.9	583.3 583.3-583.3	583.6 583.6-583.6	583.8 583.8-583.8	584.1 584.1-584.1	593.0
Lake Michigan	93	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	583.9 583.9-583.9	586.2
Lake Michigan	94	N/A	N/A	582.6 582.6-582.6	582.9 582.9-582.9	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	585.6
Lake Michigan	95	N/A	N/A	582.6 582.6-582.6	583.0 583.0-583.0	583.1 583.1-583.1	583.2 583.2-583.2	583.4 583.4-583.4	586.4
Lake Michigan	96	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	589.0
Lake Michigan	97	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	583.8 583.8-583.8	587.0
Lake Michigan	98	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	586.0
Lake Michigan	99	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	586.8

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.
[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	100	N/A	N/A	582.7 582.7-582.7	583.0 583.0-583.0	583.2 583.2-583.2	583.3 583.3-583.3	583.5 583.5-583.5	588.1
Lake Michigan	101	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	587.4
Lake Michigan	102	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.4 583.4-583.4	583.6 583.6-583.6	586.8
Lake Michigan	103	N/A	N/A	582.7 582.7-582.7	583.1 583.1-583.1	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	589.6
Lake Michigan	104	N/A	N/A	582.8 582.8-582.8	583.1 583.1-583.1	583.4 583.4-583.4	583.5 583.5-583.5	583.8 583.8-583.8	589.1
Lake Michigan	105	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	590.9
Lake Michigan	106	N/A	N/A	582.8 582.8-582.8	583.2 583.2-583.2	583.4 583.4-583.4	583.5 583.5-583.5	583.8 583.8-583.8	589.6
Lake Michigan	107	N/A	N/A	582.9 582.9-582.9	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	584.0 584.0-584.0	589.5
Lake Michigan	108	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.1 584.1-584.1	586.4

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.
[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	109	N/A	N/A	582.9 582.9-582.9	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	584.0 584.0-584.0	589.1
Lake Michigan	110	N/A	N/A	582.9 582.9-582.9	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	584.0 584.0-584.0	586.8
Lake Michigan	111	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.2 584.2-584.2	590.5
Lake Michigan	112	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.7 583.7-583.7	583.9 583.9-583.9	584.2 584.2-584.2	590.5
Lake Michigan	113	N/A	N/A	582.9 582.9-582.9	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.2 584.2-584.2	590.5
Lake Michigan	114	N/A	N/A	582.9 582.9-582.9	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.2 584.2-584.2	589.7
Lake Michigan	115	N/A	N/A	582.9 582.9-582.9	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.2 584.2-584.2	587.0
Lake Michigan	116	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.7 583.7-583.7	583.9 583.9-583.9	584.2 584.2-584.2	588.0
Lake Michigan	117	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.7 583.7-583.7	583.9 583.9-583.9	584.2 584.2-584.2	585.8

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.
[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Table 16: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1-Percent Annual Chance[1,2]		Starting Stillwater Elevations (feet NAVD88) Range of Stillwater Elevations (feet NAVD88)					1 Percent Annual Chance Total Water Elevation[3] (feet NAVD88)
		Significant Wave Height H_s (feet)	Peak Wave Period T_p (second)	10-Percent Annual Chance	4-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance	
Lake Michigan	118	N/A	N/A	583.0 583.0-583.0	583.4 583.4-583.4	583.7 583.7-583.7	583.9 583.9-583.9	584.2 584.2-584.2	598.1
Lake Michigan	119	N/A	N/A	582.9 582.9-528.9	583.3 583.3-583.3	583.5 583.5-583.5	583.7 583.7-583.7	584.0 584.0-584.0	586.5
Lake Michigan	120	N/A	N/A	582.9 582.9-528.9	583.3 583.3-583.3	583.6 583.6-583.6	583.7 583.7-583.7	584.0 584.0-584.0	590.2
Lake Michigan	121	N/A	N/A	582.9 582.9-528.9	583.3 583.3-583.3	583.6 583.6-583.6	583.8 583.8-583.8	584.1 584.1-584.1	585.8
Lake Michigan	122	N/A	N/A	582.9 582.9-528.9	583.4 583.4-583.4	583.6 583.6-583.6	583.8 583.8-583.8	584.1 584.1-584.1	588.3

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[2]Wave data correspond to the 1-percent annual chance floodplain but may not be directly associated with the 1-percent annual chance SWEL.
[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

Figure 9: Transect Location Map

Lake County, IL

Village of Glencoe
170095

Lake Michigan

Village of Winnetka
170176

1 inch = 1,500 feet

Feet
0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

Village of Winnetka
170176

Cook County
170054

Village of Kenilworth
170113

Village of Wilmette
170175

Lake Michigan

North Shore Channel

City of Evanston
170090

Village of Skokie
171000

25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55

N

1 inch = 1,500 feet

Feet
0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

N

1 inch = 1,500 feet

Feet

0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

N

1 inch = 1,500 feet

0 750 1,500 3,000 Feet

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

N

1 inch = 1,500 feet

Feet
0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

98

99

100

Chicago River

City of Chicago
170074

Lake Michigan

101

102

103

104

1 inch = 1,500 feet

Feet
0 750 1,500 3,000

N

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

N

1 inch = 1,500 feet

Feet
0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

1 inch = 1,500 feet

N

0 750 1,500 3,000 Feet

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

Figure 9: Transect Location Map (continued)

117

City of Chicago
170074

118

Lake Michigan

119

Cook County
170054

City of Chicago
170074

Cook County
170054

120

121

122

Lake County, IN

Cook County
170054

1 inch = 1,500 feet

N

Feet
0 750 1,500 3,000

Map Projection:
NAD 1983 State Plane Illinois
East FIPS 1201 Feet

NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS:

0094, 0113, 0251, 0252, 0254, 0258, 0266, 0268, 0269, 0407, 0409, 0417, 0436, 0438, 0440, 0526, 0528, 0529, 0537, 0539, 0543, 0657, 0659

FEMA

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses
[Not Applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses
[Not Applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. In the past, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). All newly created or revised FIS reports and FIRMs are now prepared using the North American Vertical Datum of 1988 (NAVD88) vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Cook County are provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Streamwood	NW	42.125	88.250	-0.203
Palatine	NW	42.125	88.125	-0.226
Arlington Heights	NW	42.125	88.000	-0.256
Park Ridge	NW	42.125	87.875	-0.233
Evanston	NW	42.125	87.750	-0.230
West Chicago	NW	42.000	88.250	-0.262
Lombard	NW	42.000	88.125	-0.272
Elmhurst	NW	42.000	88.000	-0.282
River Forest	NW	42.000	87.875	-0.308
Chicago Loop	NW	42.000	87.750	-0.272
Chicago Loop	NE	42.000	87.625	-0.305
Berwyn	NW	41.875	87.875	-0.295
Englewood	NW	41.875	87.750	-0.272
Jackson Park	NW	41.875	87.625	-0.282
Palos Park	NW	41.750	87.875	-0.282
Blue Island	NW	41.750	87.750	-0.289
Lake Calumet	NW	41.750	87.625	-0.325
Lake Calumet	NE	41.750	87.500	-0.351
Mokena	NW	41.625	88.000	-0.279
Tinley Park	NW	41.625	87.875	-0.285
Harvey	NW	41.625	87.750	-0.302
Calumet City	NW	41.625	87.625	-0.325
Calumet City	NE	41.625	87.500	-0.348
Steger	NW	41.500	87.750	-0.289
Dyer	NW	41.500	87.625	-0.302
Dyer	NE	41.500	87.500	-0.308
Average Conversion from NGVD29 to NAVD88 = -0.284 feet				

Calculations for the vertical offsets on a stream by stream basis are depicted in Table 20.

Table 20: Stream-Based Vertical Datum Conversion

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Lord's Park Tributary	-0.255
Poplar Creek	-0.245

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping.

Base map information shown on the FIRM was derived from the sources described in Table 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
2005 Digital Orthophotography	U.S. Geological Survey	April 2006		Orthoimagery for FIRM panels dated 8/19/2008 (USGS 2006)
2012 Digital Orthophotography	Cook County Board of Commissioners	April 2013		Orthoimagery for FIRM panels dated 11/1/2019 (CCBC 2013)
2012 Digital Orthophotography	USDA-FSA Aerial Photography Field Office	August 22, 2012		Orthoimagery for FIRM panels dated 9/10/2021 (USDA 2012)
2019 Digital Orthophotography	Cook County Board of Commissioners	April 29, 2020		Orthoimagery for FIRM panels dated TBD (CCBC 2020)
National Hydrography Dataset	U.S. Geological Survey	March 7, 2013		Streams and rivers (USGS 2013)
Political Boundaries	Cook County GIS Department	March 20, 2020		Cook County municipality boundaries (Cook County 2020)
Public Land Survey System (PLSS)	U.S. Geological Survey	1997	1:12,000	PLSS data were digitized from USGS quadrangles (USGS 1997)
Stream Gages	U.S. Geological Survey	September 17, 2020		Stream gages (USGS 2020)

Table 21: Base Map Sources (continued)

Data Type	Data Provider	Data Date	Data Scale	Data Description
Submittal Information for Cook Co. IL Basemap Aquisition and updated FIRM panels	Federal Emergency Management Agency	September 30, 2014		Submission Information for Cook County, Illinois and updated FIRM panels dated 9/10/2021. S_FIRM_Pan, S_Submittal_Info (STARR II 2014)
Transportation Features	Illinois Department of Transportation	February 28, 2020		Road centerlines and railroads (IDOT 2020)
Watershed Boundary Dataset	U.S. Geological Survey	December 16, 2015	1:24,000	HUC-8 watershed boundaries (USGS 2015)

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the flood and wave elevations determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 22, and knowledge of coastal flood processes. In ponding areas, flood elevations were determined at each junction of the model; between junctions, boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1- and 0.2-percent annual chance floodplain boundaries are close together, only the 1-percent annual chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Barrington Hills, Village of; Cook County Unincorporated Areas; Elgin, City of; Hoffman Estates, Village of; Inverness, Village of; Schaumburg, Village of; South Barrington, Village of	Poplar Creek East Branch, Poplar Creek Lord's Park Tributary 1, Poplar Creek Schaumburg Branch, Poplar Creek Tributary 1, Poplar Creek Tributary 2, Spring Creek (Fox), Spring Creek (Fox) Tributary C, Spring Creek (Fox) Tributary E	2017 Digital Terrain Model	0.101 meters at the 95th percentile	0.939 meters	USGS 2019
Chicago, City of; Evanston, City of; Glencoe, Village of; Kenilworth, Village of; Wilmette, Village of; Winnetka, Village of	Lake Michigan	1 Meter Resolution DEM Data	15 cm Root Mean Square Error (RMSE)V	1 Meter	JALBTCX 2013

Table 22: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Barrington Hills, Village of; Barrington, Village of; Bartlett, Village of; Cook County Unincorporated Areas; East Dundee, Village of; Elgin, City of; Hanover Park, Village of; Hoffman Estates, Village of; Inverness, Village of; Schaumburg, Village of; South Barrington, Village of; Streamwood, Village of	Poplar Creek, Poplar Creek East Branch, Poplar Creek East Branch Tributary A, Poplar Creek Lord's Park Overflow, Poplar Creek Lord's Park Tributary, Poplar Creek Lord's Park Tributary 1, Poplar Creek Railroad Tributary, Poplar Creek Schaumburg Branch, Poplar Creek South Branch, Poplar Creek South Branch Tributary A, Poplar Creek Tributary 1, Poplar Creek Tributary 2, Poplar Creek Tributary 3, Poplar Creek Tributary 4, Poplar Creek Tributary A, Spring Creek (Fox), Spring Creek (Fox) Overflow, Spring Creek (Fox) Tributary A, Spring Creek (Fox) Tributary A1, Spring Creek (Fox) Tributary B, Spring Creek (Fox) Tributary C, Spring Creek (Fox) Tributary D, Spring Creek (Fox) Tributary E, Spring Creek (Fox) Tributary F, Spring Creek (Fox) Tributary F1	2008 Digital Terrain Model	9.14 cm RMSEz	0.67 meter at 95% confidence level	CCBC 2010

Table 22: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Alsip, Village of; Cook County, Unincorporated Areas; Crestwood, Village of; Oak Forest, City of; Orland Hills, Village of; Orland Park, Village of; Palos Park, Village of	Alsip Drainage Ditch, Arroyo Ditch, Boca Rio Ditch, Mill Creek, Mill Creek West Branch, Tinley Creek, Tinley Creek Overflow	2008 Digital Terrain Model	9.14 cm RMSEz	0.67 meter at 95% confidence level	CCBC 2010
All communities	All Approximate studies; all detailed studies except for streams listed above	2003 LiDAR	0.6 feet at 95% confidence level	2.2 feet at 95% confidence level	CCBC 2006

BFEs shown at cross sections on the FIRM represent the 1-percent annual chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

Table 23: Floodway Data

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
57th Street Ditch	*	*	*	*	*	*	*	*
59th Street Ditch								
A	1,652[1]	76	77	3.7	653.3	653.3	653.4	0.1
B	2,882[1]	51	52	4.0	665.9	665.9	666.0	0.1
63rd Street Ditch								
A	525[1]	55	135	5.9	640.0	640.0	640.0	0.0
B	730[1]	43	104	6.6	641.9	641.9	641.9	0.0
C	785[1]	51	147	6.2	642.9	642.9	642.9	0.0
D	986[1]	71	214	3.1	644.9	644.9	644.9	0.0
E	1,450[1]	100[2]	253	3.6	645.9	645.9	645.9	0.0
F	1,508[1]	224	330	2.0	651.2	651.2	651.2	0.0
G	2,422[1]	123	230	3.6	659.2	659.2	659.2	0.0

[1] Feet above mouth at Flag Creek
[2] Floodway width reflects constricted section, see FIRM panel for regulatory floodway
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

57TH STREET DITCH
59TH STREET DITCH
63RD STREET DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
67th Street Ditch								
A	7,000[1]	31	31	3.2	656.6	656.6	656.6	0.0
B	7,705[1]	51	36	2.7	662.9	662.9	662.9	0.0
C	8,455[1]	17	22	3.7	671.9	671.9	672.0	0.1
D	8,895[1]	17	21	3.7	677.3	677.3	677.4	0.1
71st Street Ditch								
A	260[2]	26	62	8.9	583.4	583.4	583.4	0.0
B	420[2]	24	97	5.7	585.5	585.5	585.5	0.0
C	690[2]	16	55	5.6	588.6	588.6	588.6	0.0
D	1,580[2]	246	293	1.0	589.4	589.4	589.4	0.0
E	2,055[2]	314	458	1.2	589.5	589.5	589.5	0.0
F	2,655[2]	133	283	2.0	590.1	590.1	590.2	0.1
G	3,120[2]	188	365	1.5	590.7	590.7	590.8	0.1
H	3,875[2]	141	400	1.4	591.4	591.4	591.5	0.1

[1]Feet above mouth at Des Plaines River
[2]Feet above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

67TH STREET DITCH
71ST STREET DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
76th Avenue Ditch								
A	2,889[1]	686	1,218	1.1	693.9	693.9	693.9	0.0
B	3,180[1]	44	1,047	1.6	693.9	693.9	693.9	0.0
C	3,732[1]	40	248	1.2	693.9	693.9	693.9	0.0
D	3,958[1]	36	276	0.9	694.2	694.2	694.2	0.0
E	4,143[1]	33	240	0.9	694.9	694.9	694.9	0.0
F	4,478[1]	36	134	1.7	695.4	695.4	695.4	0.0
G	4,823[1]	37	128	1.8	695.5	695.5	695.5	0.0
H	5,103[1]	53	103	2.2	695.6	695.6	695.6	0.0
I	5,433[1]	82	121	1.6	696.3	696.3	696.3	0.0
J	5,653[1]	140	148	1.5	697.2	697.2	697.2	0.0
K	5,919[1]	427	103	1.8	697.9	697.9	697.9	0.0
L	7,179[1]	402	1,867	0.1	700.2	700.2	700.2	0.0
79th Street Ditch								
A	760[2]	26	45	3.8	679.6	679.6	679.7	0.1
B	905[2]	71	574	0.3	688.8	688.8	688.9	0.1
C	1,155[2]	81	343	0.5	688.8	688.8	688.9	0.1
D	1,400[2]	43	128	1.3	689.0	689.0	689.1	0.1

[1]Feet above confluence with Midlothian Creek
[2]Feet above confluence with Flag Creek Tributary C

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

76TH AVENUE DITCH 79TH STREET DITCH

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Addison Creek								
A	2,315	61	465	5.4	619.8	619.5[2]	619.5	0.0
B	4,355	90	796	2.9	622.9	622.9	622.9	0.0
C	5,785	89	790	2.9	624.2	624.2	624.2	0.0
D	7,100	260	822	2.6	625.3	625.3	625.3	0.0
E	7,725	81	764	2.8	626.0	626.0	626.0	0.0
F	9,200	132	806	2.7	626.9	626.9	627.0	0.1
G	10,300	106	753	2.4	627.5	627.5	627.6	0.1
H	11,500	100	756	2.4	627.9	627.9	628.0	0.1
I	14,075	335	970	2.3	628.6	628.6	628.6	0.0
J	14,735	223	866	2.6	629.3	629.3	629.3	0.0
K	15,205	172	643	2.5	629.5	629.5	629.5	0.0
L	16,795	275	961	2.5	630.7	630.7	630.8	0.1
M	17,455	106	705	2.3	630.9	630.9	631.0	0.1
N	18,785	209	760	1.8	631.9	631.9	632.0	0.1
O	20,255	390	977	1.4	633.3	633.3	633.4	0.1
P	20,830	48	225	5.8	633.4	633.4	633.5	0.1
Q	21,065	216	837	1.6	634.1	634.1	634.2	0.1
R	22,175	75	376	3.4	634.5	634.5	634.6	0.1
S	24,855	200	581	1.5	636.6	636.6	636.7	0.1
T	25,605	200	537	1.6	637.2	637.2	637.3	0.1
U	26,340	250	631	1.3	638.1	638.1	638.2	0.1

[1]Feet above confluence with Salt Creek
[2]Elevation computed without consideration of backwater effects from Salt Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

ADDISON CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Addison Creek (continued)								
V	28,145	79	325	2.5	639.5	639.5	639.6	0.1
W	29,100	124	341	2.4	639.8	639.8	639.9	0.1
X	29,800	41	270	1.9	640.1	640.1	640.2	0.1
Y	30,425	148	593	0.9	640.3	640.3	640.4	0.1
Z	31,135	121	495	1.0	640.4	640.4	640.5	0.1
AA	32,790	43	205	2.5	640.8	640.8	640.9	0.1
AB	34,115	38	140	3.4	641.2	641.2	641.3	0.1
AC	34,650	115	775	0.6	644.5	644.5	644.5	0.0
AD	35,800	165	1,370	0.3	644.6	644.6	644.7	0.1
AE	36,585	312	2,982	0.2	644.9	644.9	644.9	0.0
AF	37,695	35	130	3.7	645.1	645.1	645.2	0.1
AG	38,325	71	182	2.6	646.2	646.2	646.3	0.1
AH	39,865	50	241	2.0	647.4	647.4	647.5	0.1
AI	40,735	43	181	2.6	648.1	648.1	648.2	0.1
AJ	41,135	273	653	0.7	651.6	651.6	651.7	0.1
AK	42,725	520	1,990	0.6	651.8	651.8	651.9	0.1
AL	43,305	64	386	3.1	654.4	654.4	654.4	0.0
AM	44,335	79	403	2.4	654.7	654.7	654.7	0.0

[1]Feet above confluence with Salt Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

ADDISON CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Alsip Drainage Ditch	*	*	*	*	*	*	*	*
Arroyo Ditch								
A	125[1]	90	109	1.0	673.6	673.6	673.6	0.0
B	946[1]	118	192	0.8	676.7	676.7	676.7	0.0

[1]Feet above confluence with Boca Rio Ditch
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL
AND INCORPORATED AREAS

FLOODWAY DATA

ALSIP DRAINAGE DITCH
ARROYO DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Belaire Creek								
A	2,310[1]	32	90	1.3	606.4	606.3[3]	606.4	0.1
B	3,925[1]	27	73	0.9	607.1	607.1	607.2	0.1
Boca Rio Ditch								
A	1,137[2]	167	383	2.8	626.8	626.8	626.8	0.0
B	3,767[2]	52	124	8.7	645.6	645.6	645.6	0.0
C	5,696[2]	253	562	3.1	657.0	657.0	657.0	0.0
D	8,009[2]	331	512	1.6	666.3	666.3	666.3	0.0
E	9,817[2]	94	193	2.3	670.5	670.5	670.5	0.0
F	11,110[2]	85	135	2.9	675.0	675.0	675.1	0.1
G	12,462[2]	35	100	3.8	682.4	682.4	682.4	0.0

[1]Feet above mouth
[2]Feet above confluence with Tinley Creek
[3]Elevation computed without consideration of backwater effects from Dixie Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BELAIRE CREEK BOCA RIO DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Buffalo Creek								
A	15,602	274	954	2.1	653.2	653.2	653.2	0.0
B	16,394	297	917	2.2	654.4	654.4	654.4	0.0
C	17,947	285	1,077	2.0	656.4	656.4	656.5	0.1
D	19,013	55	364	5.8	658.3	658.3	658.4	0.1
E	19,679	293	1,069	2.0	659.3	659.3	659.4	0.1
F	21,606	170	600	3.7	663.1	663.1	663.2	0.1
G	22,778	260	984	2.2	664.8	664.8	664.8	0.0
H	25,936	39	210	7.2	670.3	670.3	670.4	0.1
I	26,856	90	347	4.3	672.4	672.4	672.5	0.1
J	27,396	207	715	2.1	673.0	673.0	673.1	0.1
K	28,396	308	918	1.6	677.2	677.2	677.3	0.1
L	28,736	50	555	2.6	677.7	677.7	677.7	0.0

[1]Feet above confluence with Des Plaines River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUFFALO CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Buffalo Creek Tributary A								
A	5,000	95	182	2.9	708.2	708.2	708.3	0.1
B	5,130	40	560	1.0	708.9	708.9	708.9	0.0
C	5,625	345	1,071	0.5	710.2	710.2	710.3	0.1
D	6,224	520	2,035	0.3	712.0	712.0	712.0	0.0
E	6,811	392	2,024	0.2	712.8	712.8	712.9	0.0
F	7,306	240	1,048	0.4	712.8	712.8	712.9	0.0
G	8,240	233	1,312	2.0	713.5	713.5	713.6	0.1
H	8,950	70	86	5.1	714.2	714.2	714.2	0.0
I	9,200	40	96	4.4	714.5	714.5	714.5	0.0
J	9,725	136	167	0.5	714.6	714.6	714.6	0.0
K	9,825	30	63	6.8	715.7	715.7	715.7	0.0
L	10,800	30	63	6.6	716.4	716.4	716.4	0.0
M	11,090	909	63	6.6	717.4	717.4	717.4	0.0
N	11,190	329	397	1.0	717.5	717.5	717.6	0.1
O	12,370	161	137	2.9	720.1	720.1	720.2	0.1
P	12,420	200	540	0.7	720.2	720.2	720.2	0.0
Q	12,760	290	332	1.2	720.8	720.8	720.8	0.0
R	12,850	279	450	0.9	721.3	721.3	721.4	0.1
S	13,770	209	239	1.3	722.7	722.7	722.8	0.1
T	13,900	200	307	1.0	722.9	722.9	722.9	0.0
U	14,400	44	82	3.9	724.5	724.5	724.6	0.1

[1]Feet above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUFFALO CREEK TRIBUTARY A

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Buffalo Creek Tributary A (continued)								
V	14,590[4]	30	53	6.0	725.6	725.6	725.6	0.0
W	14,700[4]	20	79	3.7	726.7	726.7	726.7	0.0
X	15,110[4]	38	82	3.6	729.8	729.8	729.9	0.1
Y	15,210[4]	90	283	1.0	731.3	731.3	731.3	0.0
Z	18,050[4]	270	195	1.4	739.7	739.7	739.7	0.0
AA	18,552[4]	103	168	2.8	740.5	740.5	740.5	0.0
AB	19,195[4]	750	1,035	0.4	740.7	740.7	740.7	0.0
AC	19,350[4]	508	1,181	0.2	740.7	740.7	740.7	0.0
AD	20,559[4]	266	634	0.4	741.1	741.1	741.1	0.0
AE	20,854[4]	80	120	2.0	741.9	741.9	742.0	0.1
AF	20,931[4]	106	180	1.6	742.2	742.2	742.2	0.0
AG	21,544[4]	165	1,044	0.1	743.8	743.8	743.9	0.1
AH	21,949[4]	135	945	0.2	743.8	743.8	743.9	0.1
AI	22,548[4]	41	201	1.1	744.0	744.0	744.0	0.0
AJ	22,886[4]	122	605	0.4	746.5	746.5	746.6	0.1
AK	23,656[4]	30	88	2.6	748.0	748.0	748.1	0.1
AL	24,156[4]	16	11	2.4	751.2	751.2	751.3	0.0
AM	24,540[4]	42	98	0.3	757.7	757.7	757.7	0.0
AN	24,718[4]	65	127	0.2	757.7	757.7	757.7	0.0

[1]Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Butterfield Creek								
A	1,250	488	1,905	1.4	615.3	615.3	615.4	0.1
B	3,150	765	2,459	1.1	616.5	616.5	616.5	0.0
C	6,600	195	829	3.3	622.3	622.3	622.4	0.1
D	11,000	519	2,285	1.2	632.6	632.6	632.7	0.1
E	15,200	501	2,319	1.2	638.4	638.4	638.5	0.1
F	16,600	353	1,774	1.6	641.2	641.2	641.3	0.1
G	19,450	387	1,668	1.8	645.5	645.5	645.6	0.1
H	21,300	445	1,310	2.2	647.3	647.3	647.4	0.1
I	24,100	436	1,279	2.0	652.2	652.2	652.3	0.1
J	27,350	270	861	2.7	657.7	657.7	657.8	0.1
K	29,700	290	1,378	1.7	663.3	663.3	663.4	0.1
L	34,200	416	1,335	1.8	668.1	668.1	668.2	0.1
M	37,900	342	1,120	2.0	672.9	672.9	673.0	0.1
N	39,520	387	2,777	0.8	679.0	679.0	679.1	0.1
O	41,900	253	1,343	1.6	680.7	680.7	680.8	0.1
P	44,900	220	929	2.2	683.9	683.9	684.0	0.1
Q	46,420	62	264	3.0	684.9	684.9	685.0	0.1
R	49,220	192	880	0.9	691.1	691.1	691.2	0.1
S	52,155	280	594	1.1	692.3	692.3	692.4	0.1
T	54,355	74	290	1.9	693.6	693.6	693.7	0.1
U	55,255	64	373	1.5	694.3	694.3	694.4	0.1

[1]Feet above confluence with Thorn Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUTTERFIELD CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
Butterfield Creek (continued)								
V	58,705	60	447	1.1	695.7	695.7	695.8	0.1
W	60,495	912	1,952	0.2	696.4	696.4	696.4	0.0
X	63,595	1,432	3,834	0.3	696.7	696.7	696.8	0.1
Y	68,045	288	484	1.9	698.9	698.9	699.0	0.1
Z	70,717	740	1,943	0.2	702.8	702.8	702.9	0.1
AA	72,635	340	355	1.7	703.4	703.4	703.5	0.1
AB	74,727	44	174	2.2	705.6	705.6	705.7	0.1
AC	76,225	260	410	0.6	706.8	706.8	706.9	0.1
AD	77,355	140	316	0.4	707.0	707.0	707.1	0.1

[1]Feet above confluence with Thorn Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUTTERFIELD CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
Butterfield Creek East Branch								
A	500	83	421	3.3	685.0	685.0	685.1	0.1
B	1,517	108	456	3.1	687.0	687.0	687.1	0.1
C	2,417	96	570	2.5	688.5	688.5	688.6	0.1
D	4,080	59	256	5.4	691.8	691.8	691.9	0.1
E	4,920	305	1,289	1.1	694.2	694.2	694.3	0.1
F	5,902	518	1,081	1.2	695.3	695.3	695.4	0.1
G	7,852	245	615	2.1	697.5	697.5	697.6	0.1
H	9,312	700	1,600	1.2	702.0	702.0	702.1	0.1
I	11,262	250	1,400	0.9	702.0	702.0	702.1	0.1
J	13,274	400	1,084	1.1	704.1	704.1	704.2	0.1
K	14,864	254	828	1.3	705.9	705.9	706.0	0.1
L	16,474	226	410	2.5	710.6	710.6	710.7	0.1
M	18,484	110	310	3.2	720.0	720.0	720.1	0.1
G	7,852	245	615	2.1	697.5	697.5	697.6	0.1
H	9,312	700	1,600	1.2	702.0	702.0	702.1	0.1
I	11,262	250	1,400	0.9	702.0	702.0	702.1	0.1
J	13,274	400	1,084	1.1	704.1	704.1	704.2	0.1
K	14,864	254	828	1.3	705.9	705.9	706.0	0.1
L	16,474	226	410	2.5	710.6	710.6	710.7	0.1
M	18,484	110	310	3.2	720.0	720.0	720.1	0.1
N	20,334	139	431	2.1	726.5	726.5	726.6	0.1
O	22,184	88	187	2.9	739.6	739.6	739.7	0.1

[1]Feet above confluence with Butterfield Creek

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Butterfield Creek East Branch Tributary								
A	1,350[1]	150	630	1.5	702.7	702.7	702.8	0.1
B	5,760[1]	60	245	2.9	711.2	711.2	711.3	0.1
C	6,495[1]	40	144	4.9	713.2	713.2	713.3	0.1
D	9,219[1]	330	2,381	0.3	722.7	722.7	722.8	0.1
E	10,547[1]	159	766	1.0	729.6	729.6	729.7	0.1
F	11,674[1]	140	300	1.8	730.4	730.4	730.5	0.1
Butterfield Creek East Branch Tributary A								
A	0.11[2]	22	50	1.2	722.2	722.2	722.3	0.1
B	0.18[2]	23	29	1.9	727.5	727.5	727.6	0.1
C	0.34[2]	15	21	1.7	729.1	729.1	729.2	0.1
D	0.39[2]	19	19	1.8	730.8	730.8	730.9	0.1

[1]Feet above confluence with Butterfield Creek East Branch
[2]Miles above confluence with Butterfield Creek East Branch Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUTTERFIELD CREEK EAST BRANCH TRIBUTARY
BUTTERFIELD CREEK EAST BRANCH TRIBUTARY A

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Butterfield Creek Tributary No. 1								
A	0.02[1]	120	328	0.6	646.3	644.6[3]	644.7	0.1
B	0.23[1]	65	84	2.4	649.9	649.9	650.0	0.1
C	0.34[1]	270	398	0.5	654.7	654.7	654.8	0.1
D	0.36[1]	267	267	0.7	654.7	654.7	654.8	0.1
Butterfield Creek Tributary No. 3								
A	0.16[1]	150	188	1.7	652.5	652.5	652.6	0.1
B	0.23[1]	60	61	2.4	654.1	654.1	654.2	0.1
C	0.30[1]	60	162	0.9	657.8	657.8	657.9	0.1
Butterfield Creek Tributary No. 4								
A	0.01[2]	200	258	0.9	653.3	653.3	653.4	0.1
B	0.16[2]	80	195	1.2	659.1	659.1	659.2	0.1
C	0.28[2]	75	89	2.4	663.0	663.0	663.1	0.1

[1]Miles above confluence with Butterfield Creek
[2]Miles above confluence with Butterfield Creek Tributary No. 3
[3]Elevation computed without consideration of backwater effects from Butterfield Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUTTERFIELD CREEK TRIBUTARY NO. 1
BUTTERFIELD CREEK TRIBUTARY NO. 3
BUTTERFIELD CREEK TRIBUTARY NO. 4

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Sag Channel Tributary A								
A	4,610[1]	70	68	6.3	627.4	627.4	627.4	0.0
B	4,820[1]	44	70	6.1	630.3	630.3	630.4	0.1
C	9,220[1]	149	158	2.5	665.3	665.3	665.4	0.1
D	12,000[1]	102	127	2.2	675.3	675.3	675.4	0.1
E	14,400[1]	30	26	2.4	710.7	710.7	710.8	0.1
Calumet Sag Channel Tributary AA								
A	100[2]	34	65	2.6	666.7	666.7	666.8	0.1
B	1,150[2]	19	23	4.3	686.7	686.7	686.8	0.1
Calumet Sag Channel Tributary B								
A	300[3]	59	196	3.9	593.9	593.9	593.9	0.0
B	1,270[3]	60	191	3.0	605.7	605.7	605.8	0.1
C	1,911[3]	63	374	1.9	606.6	606.6	606.7	0.1
D	2,661[3]	24	124	1.9	608.1	608.1	608.2	0.1

[1]Feet above mouth at Calumet Sag Channel
[2]Feet above mouth
[3]Feet above confluence with the Calumet Sag Channel

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET SAG CHANNEL TRIBUTARY A
CALUMET SAG CHANNEL TRIBUTARY AA
CALUMET SAG CHANNEL TRIBUTARY B

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Sag Channel Tributary C								
A	7,870	150	481	2.3	620.6	620.6	620.6	0.0
B	8,470	60	180	2.9	621.2	621.2	621.3	0.1
C	9,590	350	1,169	1.5	623.7	623.7	623.8	0.1
D	10,260	45	87	5.1	627.0	627.0	627.1	0.1
E	10,667	70	136	2.3	629.0	629.0	629.0	0.0
F	10,697	45	76	4.1	629.1	629.1	629.2	0.1
G	10,740	80	230	1.4	630.1	630.1	630.1	0.0
H	10,941	111	114	2.7	630.5	630.5	630.6	0.1
I	11,264	75	154	2.0	631.2	631.2	631.2	0.0
J	11,627	46	114	2.7	631.4	631.4	631.5	0.1
K	11,750	80	161	1.9	631.9	631.9	631.9	0.0
L	11,850	72	140	2.2	632.0	632.0	632.1	0.1
M	11,950	60	133	2.0	632.3	632.3	632.3	0.0
N	12,150	26	71	3.7	632.6	632.6	632.7	0.1
O	12,350	80	193	1.4	633.0	633.0	633.0	0.0
P	12,680	66	82	3.2	633.9	633.9	634.0	0.1
Q	13,010	65	95	2.8	635.9	635.9	635.9	0.0
R	13,120	34	65	4.0	636.1	636.1	636.2	0.1
S	13,230	90	626	0.4	637.4	637.4	637.4	0.0
T	13,340	116	354	1.8	637.4	637.4	637.5	0.1

[1]Feet above mouth at Calumet Sag Channel

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET SAG CHANNEL TRIBUTARY C

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Sag Channel Tributary C (continued)								
U	13,450	50	309	0.8	639.6	639.6	639.6	0.0
V	13,460	50	210	1.2	639.6	639.6	639.7	0.1
W	13,470	50	376	0.7	640.0	640.0	640.0	0.0
X	13,690	82	244	1.1	640.1	640.1	640.2	0.1
Y	13,900	65	295	0.6	640.4	640.4	640.4	0.0
Z	14,030	65	119	1.6	640.5	640.5	640.6	0.1
AA	14,150	65	92	2.1	641.2	641.2	641.2	0.0
AB	14,250	46	51	3.7	641.7	641.7	641.8	0.1
AC	14,500	135	674	0.3	643.1	643.1	643.1	0.0
AD	14,600	150	485	0.4	643.1	643.1	643.2	0.1
AE	16,050	75	101	1.9	647.1	647.1	647.2	0.1

[1]Feet above mouth at Calumet Sag Channel

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Union Drainage Ditch								
A	5,601	206	728	1.6	596.5	596.5	596.5	0.0
B	6,186	33	146	7.6	597.6	597.6	597.6	0.0
C	7,446	83	272	4.1	601.9	601.9	601.9	0.0
D	8,497	54	301	3.4	603.1	603.1	603.1	0.0
E	8,977	51	294	3.5	603.3	603.3	603.3	0.0
F	9,512	48	260	3.9	603.4	603.4	603.4	0.0
G	10,497	40	194	5.3	604.0	604.0	604.0	0.0
H	12,113	50	274	3.3	605.1	605.1	605.1	0.0
I	12,988	51	279	3.2	605.3	605.3	605.3	0.0
J	13,588	51	262	3.4	605.6	605.6	605.6	0.0
K	14,783	50	279	3.2	606.1	606.1	606.1	0.0
L	15,609	53	290	3.1	606.4	606.4	606.4	0.0
M	16,189	51	257	3.3	606.5	606.5	606.5	0.0
N	16,589	39	190	5.9	607.0	607.0	607.1	0.1
O	20,168	95	300	2.2	609.2	609.2	609.2	0.0
P	21,684	344	778	1.5	609.9	609.9	609.9	0.0
Q	26,794	21	31	7.0	616.5	616.5	616.5	0.0
R	27,239	28	89	2.5	618.9	618.9	618.9	0.0

[1]Feet above confluence with Little Calumet River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET UNION DRAINAGE DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Union Drainage Ditch Southwest Branch								
A	3,895[1]	42	114	7.4	609.6	609.6	609.6	0.0
B	8,705[1]	310	1,446	0.8	630.9	630.9	631.0	0.1
C	10,220[1]	191	350	3.1	633.8	633.8	633.9	0.1
D	12,270[1]	348	854	1.2	637.7	637.7	637.8	0.1
E	3.30[2]	43	321	2.7	653.0	653.0	653.1	0.1
F	3.43[2]	44	282	2.4	653.4	653.4	653.5	0.1
G	3.54[2]	60	289	2.4	656.1	656.1	656.2	0.1
H	3.61[2]	301	1,660	0.4	656.2	656.2	656.3	0.1
I	3.67[2]	248	1,576	0.4	656.2	656.2	656.3	0.1
J	3.72[2]	147	769	0.7	656.2	656.2	656.3	0.1
K	3.96[2]	51	143	3.9	658.3	658.3	658.4	0.1
L	3.98[2]	51	150	3.8	658.6	658.6	658.7	0.1
M	4.07[2]	40	71	7.3	660.7	660.7	660.8	0.1
N	4.39[2]	40	94	4.1	666.6	666.6	666.7	0.1
O	4.48[2]	40	103	3.7	669.2	669.2	669.3	0.1
P	4.58[2]	40	70	4.0	670.4	670.4	670.5	0.1
Q	4.75[2]	53	93	3.0	677.2	677.2	677.3	0.1
R	4.79[2]	36	49	5.7	677.8	677.8	677.9	0.1

[1] Feet above confluence with Calumet Union Drainage Ditch
[2] Miles above confluence with Calumet Union Drainage Ditch

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET UNION DRAINAGE DITCH SOUTHWEST BRANCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Union Drainage Ditch Southwest Branch Tributary N								
A	0.16	116	272	1.5	656.4	656.4	656.5	0.1
B	0.25	132	260	1.5	656.8	656.8	656.9	0.1
C	0.32	89	207	1.7	659.5	659.5	659.6	0.1
D	0.46	161	229	1.6	660.3	660.3	660.4	0.1
E	0.66	199	170	1.7	665.7	665.7	665.8	0.1
F	0.84	112	159	1.8	670.1	670.1	670.2	0.1
G	1.03	30	63	3.0	672.8	672.8	672.9	0.1
H	1.09	30	49	3.9	676.4	676.4	676.5	0.1
I	1.18	30	65	2.9	678.5	678.5	678.6	0.1

[1]Miles above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL
AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET UNION DRAINAGE DITCH SOUTHWEST BRANCH TRIBUTARY N

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Calumet Union Drainage Ditch Southwest Branch Tributary S								
A	0.04	33	154	2.4	664.1	664.1	664.2	0.1
B	0.08	65	324	1.1	668.0	668.0	668.1	0.1
C	0.15	192	1,466	0.3	668.1	668.1	668.2	0.1
D	0.18	84	514	0.7	668.1	668.1	668.2	0.1
E	0.20	39	34	6.0	673.3	673.3	673.4	0.1
F	0.31	51	65	3.1	674.6	674.6	674.7	0.1
G	0.41	74	124	1.6	675.0	675.0	675.1	0.1
H	0.48	41	48	3.2	677.3	677.3	677.4	0.1
I	0.55	27	23	6.6	681.4	681.4	681.5	0.1
J	0.64	41	39	3.9	685.3	685.3	685.4	0.1
K	0.71	80	62	2.5	686.8	686.8	686.9	0.1
L	0.79	53	60	2.1	689.6	689.6	689.7	0.1
N	0.93	28	38	2.4	693.2	693.2	693.3	0.1
O	0.96	43	43	2.2	695.0	695.0	695.1	0.1
P	1.14	201	419	0.3	697.6	697.6	697.7	0.1
Q	1.30	97	87	0.8	700.2	700.2	700.3	0.1

[1] Miles above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CALUMET UNION DRAINAGE DITCH SOUTHWEST BRANCH TRIBUTARY S

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Cherry Creek								
A	29,850[1]	130	411	3.3	633.3	633.3	633.4	0.1
Cherry Creek East Branch								
A	1,990[2]	204	495	1.4	640.4	640.4	640.5	0.1
B	4,390[2]	445	502	1.2	648.8	648.8	648.9	0.1
C	5,340[2]	200	383	1.4	650.8	650.8	650.9	0.1
D	8,760[2]	89	112	3.6	663.3	663.3	663.4	0.1
E	1.79[3]	243	188	2.2	666.6	666.6	666.7	0.1
F	1.82[3]	69	139	3.0	667.0	667.0	667.1	0.1
G	1.88[3]	350	552	0.7	669.6	669.6	669.7	0.1
H	1.93[3]	202	358	1.1	669.6	669.6	669.7	0.1
I	2.06[3]	120	136	2.0	671.7	671.7	671.8	0.1
J	2.14[3]	80	82	3.3	675.3	675.3	675.4	0.1
K	2.19[3]	380	76	3.5	678.7	678.7	678.8	0.1
L	2.24[3]	718	7,818	0.0	681.0	681.0	681.1	0.1
M	2.37[3]	100	105	2.2	682.0	682.0	682.1	0.1
N	2.46[3]	189	371	0.6	685.0	685.0	685.1	0.1

[1]Feet above confluence with Little Calumet River and Calumet Union Drainage Ditch
[2]Feet above confluence with Cherry Creek
[3]Miles above confluence with Cherry Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK CHERRY CREEK EAST BRANCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Cherry Creek East Branch Tributary								
A	0.31[1]	40	43	3.6	678.3	678.3	678.4	0.1
Cherry Creek West Branch								
A	698[2]	270	1,502	0.5	637.8	637.8	637.9	0.1
B	2,648[2]	50	131	5.9	641.1	641.1	641.2	0.1
C	3,018[2]	155	678	1.1	646.1	646.1	646.2	0.1
D	4,538[2]	151	465	1.5	651.3	651.3	651.4	0.1
E	5,898[2]	47	216	3.1	657.3	657.3	657.4	0.1
Cherry Creek West Branch East Fork								
A	0.52[3]	30	40	3.5	687.9	687.9	688.0	0.1
B	0.59[3]	30	44	3.2	690.6	690.6	690.7	0.1
C	0.67[3]	30	52	2.7	692.8	692.8	692.9	0.1
D	0.74[3]	126	138	1.0	696.4	696.4	696.5	0.1
E	0.79[3]	63	80	1.7	697.5	697.5	697.6	0.1
F	0.89[3]	41	49	2.8	703.4	703.4	703.5	0.1

[1]Miles above confluence with Cherry Creek East Branch
[2]Feet above mouth
[3]Miles above confluence with Cherry Creek West Branch

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK EAST BRANCH TRIBUTARY
CHERRY CREEK WEST BRANCH
CHERRY CREEK WEST BRANCH EAST FORK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Chicago River, North Branch								
A	0[1]	83	360	11.6	587.7	587.7	587.8	0.1
B	487[1]	82	530	7.9	589.8	589.8	589.9	0.1
C	1,185[1]	70	611	6.8	591.5	591.5	591.5	0.0
D	1,807[1]	79	694	5.9	592.4	592.4	592.4	0.0
E	2,820[1]	80	791	5.2	593.5	593.5	593.6	0.1
F	3,190[1]	80	799	5.2	593.7	593.7	593.8	0.1
G	4,201[1]	114	917	4.5	594.5	594.5	594.6	0.1
H	5,246[1]	83	789	5.2	595.9	595.9	595.9	0.0
I	6,020[1]	147	1,224	3.4	596.3	596.3	596.4	0.1
J	7,191[1]	128	1,325	3.1	597.1	597.1	597.2	0.1
K	7,630[1]	107	919	4.5	597.6	597.6	597.7	0.1
L	8,345[1]	223	2,562	1.6	598.4	598.4	598.5	0.1
M	79,119[2]	594	2,965	1.3	609.7	609.7	609.8	0.1
N	80,469[2]	288	1,846	2.1	610.2	610.2	610.3	0.1
O	81,969[2]	295	1,339	2.9	611.4	611.4	611.5	0.1
P	82,214[2]	323	1,856	2.1	613.0	613.0	613.1	0.1
Q	83,300[2]	83	645	5.1	614.4	614.4	614.4	0.0
R	84,263[2]	393	1,288	3.3	615.8	615.8	615.8	0.0
S	89,113[2]	137	848	3.9	617.2	617.2	617.3	0.1
T	98,152[2]	373	2,757	1.1	619.1	619.1	619.2	0.1

[1]Feet above Weir Dam on Chicago River, North Branch at confluence with North Shore Channel
[2]Feet above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CHICAGO RIVER, NORTH BRANCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Chicago River, North Branch (continued)								
U	104,525	328	1,866	1.6	619.9	619.9	620.0	0.1
V	108,005	635	3,159	0.8	620.3	620.3	620.4	0.1
W	111,394	112[2]	959	2.5	621.1	621.1	621.2	0.1
X	116,004	80[2]	693	3.3	623.1	623.1	623.2	0.1

[1]Feet above mouth
[2] Floodway width reflects constricted section, see FIRM panel for regulatory floodway

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CHICAGO RIVER, NORTH BRANCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Skokie River								
Y	122,600	708	2,515	0.7	624.5	624.5	624.6	0.1
Z	125,530	1,100	3,146	0.5	624.9	624.9	625.0	0.1
AA	129,073	110[2]	1,335	1.2	625.2	625.2	625.3	0.1
AB	129,535	460[3]	3,504	0.3	627.3	627.3	627.3	0.0
AC	133,237	970[3]	8,466	0.1	627.3	627.3	627.3	0.0
AD	136,155	2450[3]	4,447	0.1	627.3	627.3	627.3	0.0
AE	138,312	245[3]	1,973	0.8	627.3	627.3	627.3	0.0
AF	138,960	200[3]	1,056	0.5	627.3	627.3	627.3	0.0
AG	141,760	1930[3]	2,917	0.2	627.3	627.3	627.3	0.0
AH	144,125	700[3]	654	1.5	627.3	627.3	627.3	0.0
AI	144,789	1650[3]	707	1.4	627.3	627.3	627.3	0.0
AJ	148,460	325[3]	1,344	1.3	627.4	627.4	627.4	0.0
AK	149,045	1300[3]	8,242	0.2	627.4	627.4	627.4	0.0
AL	150,130	400[3]	3,837	0.5	627.4	627.4	627.4	0.0
AM	153,035	140[3]	441	3.1	628.3	628.3	628.3	0.0
AN	154,150	115[3]	351	3.6	629.0	629.0	629.0	0.0
AO	156,037	150[3]	435	2.9	631.3	631.3	631.3	0.0

[1]Feet above mouth
[2]Floodway width reflects constricted section, see FIRM panel for regulatory floodway
[3]Floodway width determined administratively

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

SKOKIE RIVER

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Chicago River, North Branch, Middle Fork								
A	1,690	917	3,814	0.3	624.0	624.0	624.0	0.0
B	2,980	99	510	2.0	624.0	624.0	624.0	0.0
C	5,011	220	1,016	1.0	625.6	625.6	625.7	0.1
D	6,020	44	272	3.5	626.3	626.3	626.4	0.1
E	7,261	670	1,569	0.6	626.9	626.9	627.0	0.1
F	10,083	338	338	2.8	629.7	629.7	629.8	0.1
G	12,817	199	448	2.1	633.6	633.6	633.6	0.0
H	14,237	168	633	1.5	636.2	636.2	636.3	0.1
I	19,556	522	1,363	0.7	639.3	639.3	639.4	0.1
J	22,893	330	834	1.1	643.5	643.5	643.6	0.1
K	26,618	775	1,363	0.6	645.7	645.7	645.8	0.1
L	30,428	139	703	1.6	648.7	648.7	648.8	0.1
M	33,505	75	538	2.0	650.3	650.3	650.4	0.1

[1] Feet above confluence with Chicago River, North Branch and Skokie River

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Chicago River, North Branch, West Fork								
A	1,850	335	1,816	0.8	619.7	619.7	619.8	0.1
B	2,033	310	1,891	0.8	620.1	620.1	620.2	0.1
C	5,212	246	1,236	1.2	620.7	620.7	620.8	0.1
D	8,142	105	723	2.1	622.6	622.6	622.7	0.1
E	10,616	191	781	1.8	623.7	623.7	623.8	0.1
F	12,075	74	612	1.8	624.7	624.7	624.8	0.1
G	13,768	275	1,050	1.1	625.4	625.4	625.5	0.1
H	15,212	107	576	1.9	625.9	625.9	626.0	0.1
I	17,324	75	447	2.7	627.5	627.5	627.5	0.0
J	18,406	220	769	1.6	629.4	629.4	629.4	0.0
K	20,936	240	1,775	0.7	630.4	630.4	630.4	0.0
L	23,219	1,200	1,094	1.2	630.5	630.5	630.5	0.0
M	26,231	303	753	1.7	631.0	631.0	631.1	0.1
N	29,199	127	983	1.5	635.8	635.8	635.8	0.0
O	30,789	241	1,211	0.9	636.1	636.1	636.1	0.0
P	32,359	105	601	0.7	636.6	636.6	636.6	0.0
Q	34,529	398	686	1.6	637.2	637.2	637.3	0.1
R	35,299	52	310	3.6	638.4	638.4	638.5	0.1
S	36,004	270	585	1.9	640.1	640.1	640.1	0.0
T	36,979	42	289	3.8	641.0	641.0	641.0	0.0
U	37,871	46	325	2.6	643.7	643.7	643.7	0.0
V	40,181	174	511	1.7	645.2	645.2	645.3	0.1
W	41,630	240	540	1.2	646.4	646.4	646.5	0.1
X	43,635	760	598	1.0	648.0	648.0	648.1	0.1
Y	46,783	260	712	0.7	650.6	650.6	650.7	0.1

[1]Feet above confluence with Chicago River, North Branch

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Crestwood Drainage Ditch West								
A	280	45	124	10.1	591.4	591.4	591.4	0.0
B	510	38	185	2.1	593.3	593.3	593.4	0.1
C	710	41	174	2.2	593.4	593.4	593.5	0.1
D	1,010	35	152	2.5	593.5	593.5	593.6	0.1
E	1,310	40	139	2.8	593.6	593.6	593.6	0.0
F	1,630	83	96	4.0	595.4	595.4	595.5	0.1
G	2,010	42	113	3.4	595.8	595.8	595.9	0.1
H	2,410	32	70	5.5	596.8	596.8	596.8	0.0
I	2,710	33	62	6.2	598.1	598.1	598.1	0.0
J	3,110	37	60	6.4	600.2	600.2	600.2	0.0
K	3,510	46	56	6.8	602.4	602.4	602.4	0.0
L	3,910	58	57	6.8	604.6	604.6	604.6	0.0
M	4,210	39	73	5.3	605.8	605.8	605.8	0.0
N	4,440	52	71	5.4	606.5	606.5	606.5	0.0
O	4,510	85	230	1.7	606.9	606.9	606.9	0.0

[1] Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Crystal Creek								
A	2,040[1]	156	289	1.7	627.4	621.6[3]	621.6	0.0
B	3,892[1]	144	443	1.1	630.3	630.3	630.3	0.0
C	4,291[1]	55	304	1.6	630.3	630.3	630.3	0.0
D	6,624[1]	412	1,129	0.5	637.5	637.5	637.5	0.0
E	8,461[1]	221	849	0.7	638.6	638.6	638.7	0.1
F	9,832[1]	221	586	0.5	638.7	638.7	638.8	0.1
G	10,952[1]	58	236	1.1	639.0	639.0	639.0	0.0
H	11,819[1]	54	145	0.2	639.0	639.0	639.0	0.0
Crystal Creek Tributary								
A	764[2]	187	309	1.0	638.8	638.8	638.8	0.0
B	2,449[2]	34	109	1.2	639.6	639.6	639.7	0.1
C	4,069[2]	22	76	1.8	642.3	642.3	642.3	0.0
D	5,774[2]	24	64	2.4	644.3	644.3	644.3	0.0

[1]Feet above confluence with Des Plaines River
[2]Feet above confluence with Crystal Creek
[3]Elevation computed without consideration of backwater effects from Des Plaines River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

CRYSTAL CREEK CRYSTAL CREEK TRIBUTARY

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Deer Creek								
A	1,920	87	986	2.1	617.3	617.3	617.4	0.1
B	1,930	39	242	8.6	619.6	619.6	619.6	0.0
C	1,950	204	1,533	1.4	619.6	619.6	619.7	0.1
D	4,040	298	2,217	0.9	619.9	619.9	620.0	0.1
E	6,420	307	1,989	1.0	620.5	620.5	620.6	0.1
F	9,015	355	1,321	1.4	621.7	621.7	621.8	0.1
G	13,820	420	1,232	1.3	625.3	625.3	625.4	0.1
H	17,070	620	534	3.1	629.1	629.1	629.2	0.1
I	18,180	960	936	1.7	631.1	631.1	631.2	0.1
J	20,870	880	859	1.8	634.2	634.2	634.3	0.1
K	25,780	300	545	2.4	641.4	641.4	641.5	0.1
L	29,550	120	866	1.4	647.6	647.6	647.7	0.1
M	33,560	360	570	2.1	654.2	654.2	654.3	0.1
N	35,600	320	456	2.5	658.0	658.0	658.1	0.1
O	40,200	300	803	1.4	666.6	666.6	666.7	0.1

[1]Feet above confluence with Thorn Creek

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Deer Creek Tributary B								
A	1,780	330	521	1.5	637.2	637.2	637.3	0.1
B	3,155	860	1,434	0.5	638.2	638.2	638.3	0.1
C	3,300	240[2]	6,208	0.1	638.9	638.9	638.9	0.0
D	8,120	299	427	1.7	646.9	646.9	647.0	0.1
E	8,220	220	799	0.9	649.1	649.1	649.1	0.0
F	13,100	103	220	3.1	664.1	664.1	664.2	0.1
G	13,220	105	2,404	0.3	668.7	668.7	668.7	0.0
H	13,850	247	770	0.4	668.7	668.7	668.8	0.1
I	14,110	300	659	0.4	669.2	669.2	669.2	0.0
J	14,270	380	1,428	0.2	669.2	669.2	669.3	0.1

[1]Feet above mouth
[2]Floodway width reflects constricted section, see FIRM panel for regulatory floodway

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

DEER CREEK TRIBUTARY B

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Des Plaines River								
A	29.25[1]	1,154	8,581	1.0	593.8	593.8	593.9	0.1
B	29.75[1]	1,020	7,531	1.2	593.9	593.9	594.0	0.1
C	30.25[1]	1,256	7,388	1.2	594.0	594.0	594.1	0.1
D	30.75[1]	705	4,718	1.8	594.2	594.2	594.3	0.1
E	31.25[1]	696	5,468	1.5	594.3	594.3	594.4	0.1
F	32.59[1]	1,012[3]	6,524	1.3	595.0	595.0	595.1	0.1
G	32.85[1]	663[3]	5,162	1.6	595.2	595.2	595.3	0.1
H	33.08[1]	667	5,249	1.6	595.2	595.2	595.3	0.1
I	33.58[1]	447	4,453	1.9	595.7	595.7	595.8	0.1
J	33.99[1]	504	5,009	1.7	596.1	596.1	596.2	0.1
K	34.51[1]	376	3,985	2.1	596.6	596.6	596.7	0.1
L	35.09[1]	267	2,981	2.8	597.4	597.4	597.5	0.1
M	35.46[1]	285	3,421	2.5	598.0	598.0	598.1	0.1
N	35.84[1]	319	3,955	2.1	598.5	598.5	598.6	0.1
O	36.32[1]	413	5,291	1.6	598.8	598.8	598.9	0.1
P	228,050[2]	658	5,119	1.5	597.7	597.7	597.8	0.1
Q	232,500[2]	602	3,008	2.6	599.4	599.4	599.5	0.1
R	236,064[2]	740	3,703	2.1	601.0	601.0	601.1	0.1
S	238,630[2]	280	1,511	5.2	603.6	603.6	603.7	0.1
T	238,808[2]	405	3,109	2.9	609.9	609.9	609.9	0.0
U	241,618[2]	371	1,704	5.3	611.6	611.6	611.7	0.1
V	244,228[2]	518	3,864	2.0	613.7	613.7	613.8	0.1
W	246,754[2]	895	5,685	1.4	615.2	615.2	615.3	0.1

[1]Miles above mouth
[2]Feet above mouth
[3]Floodway width reflects model width, see FIRM panel for regulatory floodway

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

DES PLAINES RIVER

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Des Plaines River (continued)								
X	249,511	550	2,843	2.7	615.8	615.8	615.9	0.1
Y	253,157	851	6,568	1.0	616.8	616.8	616.9	0.1
Z	255,546	710	5,301	1.3	617.8	617.8	617.9	0.1
AA	257,180	721	6,329	1.1	618.3	618.3	618.4	0.1
AB	259,500	765	5,846	1.1	618.7	618.7	618.8	0.1
AC	262,715	138	1,981	3.4	619.4	619.4	619.5	0.1
AD	264,379	695	4,910	1.4	620.2	620.2	620.3	0.1
AE	266,889	119	1,690	4.0	620.8	620.8	620.9	0.1
AF	269,211	119	1,840	3.6	621.4	621.4	621.5	0.1
AG	271,288	885	9,613	0.7	622.4	622.4	622.5	0.1
AH	273,407	221	3,362	2.0	622.9	622.9	623.0	0.1
AI	277,005	1,184	12,806	0.5	623.5	623.5	623.6	0.1
AJ	279,981	1,114	7,526	0.9	623.7	623.7	623.8	0.1
AK	282,753	769	7,843	0.8	624.3	624.3	624.4	0.1
AL	283,885	1,051	9,543	0.7	624.6	624.6	624.7	0.1
AM	287,257	2,540	16,789	0.4	625.0	625.0	625.1	0.1
AN	290,175	670	5,253	1.2	625.2	625.2	625.3	0.1
AO	293,179	558	5,695	1.1	625.5	625.5	625.6	0.1
AP	295,951	580	6,031	1.1	626.0	626.0	626.1	0.1
AQ	298,293	807	6,047	1.1	626.6	626.6	626.7	0.1
AR	301,515	720	6,370	1.0	626.9	626.9	627.0	0.1
AS	303,915	704	7,062	0.9	627.0	627.0	627.1	0.1
AT	306,867	916	8,757	0.7	627.3	627.3	627.4	0.1
AU	310,879	867	5,796	1.1	627.6	627.6	627.7	0.1

[2]Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Des Plaines River (continued)								
AV	314,553	1,534	13,860	0.5	627.9	627.9	628.0	0.1
AW	318,629	461	4,676	1.4	628.2	628.2	628.3	0.1
AX	320,341	228	2,354	2.8	628.5	628.5	628.6	0.1
AY	323,673	947	7,533	0.8	629.1	629.1	629.2	0.1
AZ	328,305	748	6,204	1.0	629.8	629.8	629.9	0.1
BA	332,993	842	6,633	0.9	630.5	630.5	630.6	0.1
BB	336,017	1,700	13,998	0.4	631.0	631.0	631.1	0.1
BC	339,117	1,213	7,980	0.8	631.3	631.3	631.4	0.1
BD	341,505	1,192	3,753	1.7	631.8	631.8	631.9	0.1
BE	345,365	797	6,251	1.0	632.8	632.8	632.9	0.1
BF	349,147	945	6,081	1.0	633.7	633.7	633.8	0.1
BG	354,577	2,620	25,225	0.2	634.9	634.9	635.0	0.1
BH	358,572	1,300	6,741	0.9	635.6	635.6	635.7	0.1
BI	360,822	1,730	6,047	1.0	635.8	635.8	635.9	0.1
BJ	363,741	692	5,925	1.0	636.5	636.5	636.6	0.1
BK	366,841	1,096	4,605	1.3	637.0	637.0	637.1	0.1
BL	370,741	844	5,783	1.1	637.7	637.7	637.8	0.1
BM	374,100	1,179	10,441	0.6	638.2	638.2	638.3	0.1
BN	377,900	1,377	8,544	0.7	638.6	638.6	638.7	0.1
BO	382,336	1,470	9,656	0.6	639.3	639.3	639.4	0.1
BP	385,886	1,405	8,018	0.8	640.0	640.0	640.1	0.1
BQ	389,586	1,892	5,612	1.1	640.2	640.2	640.3	0.1
BR	392,706	484	3,324	1.9	640.9	640.9	641.0	0.1
BS	396,576	1,026	3,849	1.6	641.9	641.9	642.0	0.1
BT	400,508	543	3,902	1.6	643.3	643.3	643.4	0.1

[2]Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Des Plaines River Tributary A								
A	0[1]	119	221	1.3	652.6	652.6	652.7	0.1
B	6[1]	119	165	1.8	652.6	652.6	652.7	0.1
C	396[1]	78	117	2.5	653.1	653.1	653.2	0.1
D	1,922[1]	94	93	3.1	661.5	661.5	661.6	0.1
E	3,040[1]	80	130	0.7	669.2	669.2	669.2	0.0
F	3,202[1]	81	84	3.4	669.7	669.7	669.8	0.1
G	4,012[1]	206	562	0.2	673.6	673.6	673.6	0.0
H	4,857[1]	45	51	2.4	674.7	674.7	674.7	0.0
Dixie Creek								
A	1,780[2]	325	305	0.1	606.4	606.4	606.5	0.1
B	2,710[2]	576	960	0.1	606.4	606.4	606.5	0.1
C	3,780[2]	190	255	0.2	606.4	606.4	606.5	0.1
D	4,600[2]	141	206	0.2	606.5	606.5	606.6	0.1

[1]Feet above Brainard Avenue
[2]Feet above Dixie Highway

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

DES PLAINES RIVER TRIBUTARY A DIXIE CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
DuPage River West Branch								
A	58.20[1]	82	341	1.7	782.7	782.7	782.7	0.0
B	58.65[1]	40	178	4.8	784.8	784.8	784.9	0.1
C	58.83[1]	40	221	3.9	786.7	786.7	786.8	0.1
D	59.12[1]	108	374	2.2	789.1	789.1	789.2	0.1
E	59.70[1]	148	443	1.8	793.0	793.0	793.1	0.1
F	59.81[1]	120	458	1.4	793.3	793.3	793.4	0.1
G	60.07[1]	46	192	2.7	794.5	794.5	794.6	0.1
H	318,500[2]	105	198	2.5	795.2	795.2	795.3	0.1
I	319,280[2]	95	278	1.8	795.4	795.4	795.5	0.1
J	319,675[2]	87	216	2.3	795.5	795.5	795.6	0.1
K	319,821[2]	61	247	1.5	796.4	796.4	796.4	0.0
L	320,321[2]	67	315	1.2	796.5	796.5	796.5	0.0
M	321,021[2]	57	194	2.0	796.6	796.6	796.6	0.0
N	321,771[2]	80	205	1.4	796.8	796.8	796.9	0.1
O	322,345[2]	65	252	1.1	796.9	796.9	796.9	0.0
P	322,627[2]	105	184	1.5	796.9	796.9	797.0	0.1
Q	322,927[2]	179	498	0.6	797.0	797.0	797.0	0.0
R	323,300[2]	47	116	1.7	797.0	797.0	797.0	0.0
S	323,608[2]	62	133	1.5	797.1	797.1	797.2	0.1
T	324,208[2]	62	78	2.6	797.4	797.4	797.5	0.1
U	324,650[2]	97	53	3.3	798.0	798.0	798.0	0.0
V	324,989[2]	58	63	2.8	798.4	798.4	798.4	0.0
W	325,889[2]	30	154	3.2	799.8	799.8	799.8	0.0
X	326,238[2]	21	69	2.5	800.6	800.6	800.6	0.0
Y	326,630[2]	40	116	1.5	800.8	800.8	800.8	0.0

[1]Miles above mouth of DuPage River
[2]Feet above mouth of DuPage River

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
East Avenue Ditch	*	*	*	*	*	*	*	*
Elk Grove Boulevard Drainage Ditch								
A	170[1]	40	366	0.5	684.1	684.1	684.1	0.0
B	1,080[1]	176	325	0.6	684.1	684.1	684.1	0.0
C	1,110[1]	200	294	0.5	684.1	684.1	684.1	0.0
D	1,750[1]	80	251	0.6	684.1	684.1	684.2	0.1
E	1,860[1]	70	158	0.9	684.2	684.2	684.2	0.0
F	2,400[1]	40	145	1.0	684.2	684.2	684.3	0.1
G	2,510[1]	40	151	0.7	684.4	684.4	684.4	0.0
H	3,260[1]	42	141	0.8	684.4	684.4	684.5	0.1
I	3,360[1]	40	97	0.7	684.8	684.8	684.8	0.0
J	4,050[1]	34	100	0.6	684.8	684.8	684.9	0.1
K	4,150[1]	34	44	0.6	684.8	684.8	684.9	0.1
L	4,560[1]	31	45	0.6	684.8	684.8	684.9	0.1
M	4,660[1]	31	44	0.6	684.8	684.8	684.9	0.1

[1]Feet above mouth
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

EAST AVENUE DITCH ELK GROVE BOULEVARD DRAINAGE DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Farmer's Creek								
A	864[1]	1,220	4,178	0.2	632.5	629.5[2]	629.5	0.0
B	1,592[1]	120	658	1.4	630.0	630.0	630.0	0.0
C	2,417[1]	245	765	0.8	630.0	630.0	630.1	0.1
D	3,283[1]	435	1,190	1.4	630.1	630.1	630.1	0.0
E	3,569[1]	539	1,147	0.5	630.5	630.5	630.5	0.0
F	4,228[1]	438	558	1.8	630.6	630.6	630.6	0.0
G	4,378[1]	330	717	1.1	631.1	631.1	631.1	0.0
H	5,344[1]	1,024	2,724	0.0	631.1	631.1	631.1	0.0
I	6,523[1]	545	537	0.2	631.2	631.2	631.2	0.0
J	7,238[1]	65	108	0.8	631.3	631.3	631.3	0.0
K	8,736[1]	102	147	1.8	632.0	632.0	632.0	0.0
Farrington Ditch	*	*	*	*	*	*	*	*

[1]Feet above confluence with Des Plaines River
[2]Elevation computed without consideration of backwater effects from the Des Plaines River
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

FARMER'S CREEK FARRINGTON DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Feehanville Ditch								
A	3,960[1]	48	543	0.2	644.1	644.1	644.1	0.0
B	6,556[1]	36	429	0.3	644.1	644.1	644.1	0.0
C	6,750[1]	43	387	0.8	644.8	644.8	644.9	0.1
D	11,600[1]	30	213	0.7	648.5	648.5	648.6	0.1
Filsen Park Ditch								
A	285[2]	*	*	*	695.4	695.4	*	*
B	1565[2]	*	*	*	695.5	695.5	*	*
C	2,560[2]	*	*	*	695.5	695.5	*	*

[1]Feet above confluence with Des Plaines River
[2]Feet above confluence with 76th Avenue Ditch
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

FEEHANVILLE DITCH FILSEN PARK DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Flag Creek								
A	3,000	327	1,174	2.7	598.7	598.7	598.8	0.1
B	3,830	100[2]	1,351	2.1	601.5	601.5	601.5	0.0
C	5,175	420	1,233	2.3	603.4	603.4	603.5	0.1
D	8,330	592	2,313	1.2	607.9	607.9	608.0	0.1
E	8,850	545	2,400	1.2	608.9	608.9	609.0	0.1
F	11,620	203	962	2.9	618.9	618.9	619.0	0.1
G	14,475	221	973	2.8	625.1	625.1	625.2	0.1
H	17,900	579	1,687	1.5	629.4	629.4	629.5	0.1
I	19,000	163	985	2.9	631.5	631.5	631.6	0.1
J	20,370	105	803	3.1	633.2	633.2	633.3	0.1
K	20,780	80	605	4.0	634.0	634.0	634.1	0.1
L	25,280	91	805	2.9	637.3	637.3	637.4	0.1
M	27,640	78	624	3.3	639.2	639.2	639.3	0.1
N	29,540	89	701	1.7	639.9	639.9	640.0	0.1
O	30,870	50	469	2.5	640.4	640.4	640.5	0.1
P	31,970	50	454	2.4	640.8	640.8	640.9	0.1
Q	32,490	82	663	1.5	640.9	640.9	641.0	0.1
R	33,330	35	296	3.4	641.7	641.7	641.8	0.1
S	34,650	142	674	1.2	642.0	642.0	642.1	0.1
T	35,720	68	564	1.3	642.1	642.1	642.2	0.1
U	36,680	373	1,136	0.7	642.2	642.2	642.3	0.1
V	37,630	97	631	1.2	642.2	642.2	642.3	0.1

[1]Feet above mouth at Des Plaines River
[2]Floodway width reflects constricted section, see FIRM panel for regulatory floodway

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

FLAG CREEK

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Flag Creek Tributary A								
A	525	350	134	1.1	628.8	628.8	628.9	0.1
B	1,025	110	117	1.3	632.2	632.2	632.2	0.0
C	1,425	60	45	3.3	636.3	636.3	636.3	0.0
D	1,790	17	31	4.8	639.4	639.4	639.5	0.1
E	2,490	80	219	0.7	648.1	648.1	648.1	0.0
F	2,620	74	179	0.8	648.1	648.1	648.2	0.1
G	5,313	26	61	1.1	674.4	674.4	674.4	0.0
Flag Creek Tributary B								
A	230	324	820	0.4	626.0	626.0	626.1	0.1
B	460	52	112	2.6	626.4	626.4	626.5	0.1
C	520	50	131	3.2	628.4	628.4	628.4	0.0
D	600	79	106	2.6	628.6	628.6	628.7	0.1
E	740	150	130	3.1	630.4	630.4	630.4	0.0
F	800	110	188	2.1	632.9	632.9	632.9	0.0
G	860	150	447	0.9	634.1	634.1	634.1	0.0
H	1,140	149	437	0.6	634.7	634.7	634.8	0.1
I	2,100	131	84	2.5	642.2	642.2	642.3	0.1
J	2,150	100	329	0.9	643.7	643.7	643.7	0.0
K	2,200	50	88	2.3	644.7	644.7	644.8	0.1
L	2,420	76	96	2.6	647.1	647.1	647.1	0.0
M	2,620	84	83	2.2	648.3	648.3	648.4	0.1
N	4,051	38	60	2.2	659.7	659.7	659.8	0.1

[1]Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Flag Creek Tributary B (continued)								
O	4,268	278	1,278	0.1	662.2	662.2	662.3	0.1
P	4,740	307	1,439	0.1	662.5	662.5	662.6	0.1
Q	5,012	105	434	0.3	664.4	664.4	664.5	0.1
R	5,233	55	221	0.3	664.4	664.4	664.5	0.1
Flag Creek Tributary C								
A	1,200	68	163	3.9	612.8	612.8	612.9	0.1
B	6,145	41	127	4.4	656.3	656.3	656.4	0.1
C	6,593	50	1,407	0.4	669.1	669.1	669.1	0.0
D	7,688	33	108	2.9	672.2	672.2	672.3	0.1

[1]Feet above mouth

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

FLAG CREEK TRIBUTARY B
FLAG CREEK TRIBUTARY C

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Flint Creek								
A	78,928[1]	23	61	1.6	852.9	852.9	853.0	0.1
B	79,269[1]	337	409	0.2	853.6	853.6	853.7	0.1
C	79,809[1]	145	1,149	0.1	853.6	853.6	853.7	0.1
D	80,979[1]	285	514	0.1	853.6	853.6	853.7	0.1
Flint Creek Tributary								
A	16,268[2]	132	43	3.3	829.5	829.5	829.5	0.0

[1]Feet above mouth
[2]Feet above confluence with Flint Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

FLINT CREEK FLINT CREEK TRIBUTARY

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Flossmoor Ditch								
A	5,310[1]	400	1,950	0.3	694.4	694.4	694.4	0.0
B	5,430[1]	453	1,840	0.3	694.4	694.4	694.5	0.1
C	6,450[1]	767	1,688	0.3	694.5	694.5	694.6	0.1
D	7,490[1]	1,686	4,441	0.05	694.5	694.5	694.6	0.1
E	10,450[1]	1,348	3,423	0.07	694.5	694.5	694.6	0.1
Flossmoor Ditch Tributary A								
A	2,330[2]	518	250	1.3	699.6	699.6	699.7	0.1
B	4,680[2]	38	74	3.7	711.1	711.1	711.2	0.1
C	4,830[2]	46	185	1.5	712.4	712.4	712.4	0.0
D	4,980[2]	54	137	2.0	712.5	712.5	712.6	0.1
E	9,080[2]	382	91	1.4	725.1	725.1	725.2	0.1

[1]Feet above confluence at Union Drainage Ditch
[2]Feet above mouth

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Golf Course Tributary								
A	2,980[1]	480	1,420	0.3	624.8	624.2[3]	625.3	0.1
B	3,990[1]	318	986	0.3	624.8	624.3[3]	624.4	0.1
C	4,920[1]	240	485	0.6	624.8	624.5[3]	624.6	0.1
D	6,040[1]	149	251	1.1	625.4	625.4	625.5	0.1
Grand Calumet River								
A	8,960[2]	253	630	0.8	580.5	580.5	580.6	0.1
B	11,611[2]	60	158	3.0	580.8	580.8	580.9	0.1
C	13,100[2]	141	340	1.4	581.6	581.6	581.7	0.1
D	14,430[2]	131	400	1.2	582.1	582.1	582.2	0.1

[1]Feet above confluence with Des Plaines River
[2]Feet above mouth at Calumet River
[3]Elevation computed without consideration of backwater effects from the Des Plaines River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

GOLF COURSE TRIBUTARY GRAND CALUMET RIVER

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hickory Creek								
A	110,550[1]	631	1,680	0.6	705.1	705.1	705.2	0.1
B	113,250[1]	108	348	2.9	710.9	710.9	711.0	0.1
C	116,150[1]	139	327	2.9	717.9	717.9	718.0	0.1
D	116,208[1]	140	355	2.7	721.1	721.1	721.1	0.0
E	116,300[1]	127	325	2.9	721.3	721.3	721.4	0.1
F	116,474[1]	250	6,382	0.2	730.2	730.2	730.2	0.0
G	117,250[1]	565	5,166	0.2	730.2	730.2	730.3	0.1
H	121,950[1]	817	5,508	0.1	730.2	730.2	730.3	0.1
I	122,276[1]	950	523	1.4	730.2	730.2	730.3	0.1
J	124,350[1]	299	648	1.1	731.2	731.2	731.3	0.1
Hickory Creek Tributary A								
A	119,450[2]	191	523	1.9	728.8	728.8	728.9	0.1
B	121,900[2]	162	352	2.8	734.2	734.2	734.3	0.1
C	123,400[2]	176	456	2.2	735.9	735.9	736.0	0.1
D	125,000[2]	160	312	3.2	739.8	739.8	739.9	0.1

[1]Feet above mouth at Des Plaines River
[2]Feet above confluence of Hickory Creek and Des Plaines River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

HICKORY CREEK HICKORY CREEK TRIBUTARY A

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Higgins Creek								
A	0.08[1]	87	540	1.6	646.5	646.5	646.5	0.0
B	0.18[1]	59	332	2.2	647.3	647.3	647.2	0.0
C	0.29[1]	42	187	4.1	647.4	647.4	647.4	0.0
D	0.50[1]	101	453	3.2	649.7	649.7	649.7	0.0
E	0.63[1]	102	492	2.9	650.2	650.2	650.2	0.0
F	0.72[1]	104	492	2.9	650.5	650.5	650.5	0.0
G	0.73[1]	62	316	4.0	650.5	650.5	650.5	0.0
H	0.89[1]	94	559	2.9	652.5	652.5	652.5	0.0
I	1.04[1]	91	464	3.5	652.9	652.9	652.9	0.0
J	1.14[1]	151	568	3.1	653.3	653.3	653.3	0.0
Higgins Creek Tributary A								
A	350[2]	67	334	1.2	659.0	659.0	659.0	0.0
B	2,881[2]	24	104	3.8	661.3	661.3	661.3	0.0
I-57 Drainage Ditch								
A	1,100[3]	57	228	2.2	607.0	607.0	607.1	0.1
B	2,535[3]	82	226	1.6	608.9	608.9	609.0	0.1
C	4,845[3]	55	217	1.5	611.3	611.3	611.4	0.1

[1]Miles above confluence with Willow Creek
[2]Feet above confluence with Higgins Creek
[3]Feet above corporate limits

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

HIGGINS CREEK
HIGGINS CREEK TRIBUTARY A
I-57 DRAINAGE DITCH

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Illinois and Michigan Canal Tributary C								
A	1,600[1]	38	110	7.0	657.7	657.7	657.8	0.1
B	3,540[1]	100	472	1.6	687.7	687.7	687.7	0.0
C	3,710[1]	250	1,923	0.4	687.8	687.8	687.9	0.1
Illinois and Michigan Canal Tributary D								
A	50[1]	34	55	7.0	583.9	583.9	584.0	0.1
B	250[1]	48	58	6.6	588.3	588.3	588.4	0.1
C	1,020[1]	61	46	7.1	600.9	600.9	601.0	0.1
D	1,610[1]	75	354	0.9	615.0	615.0	615.1	0.1
E	2,560[1]	33	70	3.8	619.0	619.0	619.1	0.1
Industrial Tributary								
A	450[2]	183	286	0.7	641.3	641.3	641.4	0.1
B	890[2]	63	160	1.3	641.4	641.4	641.5	0.1
C	1,580[2]	201	98	2.1	642.1	642.1	642.1	0.0
D	2,287[2]	59	107	1.9	644.3	644.3	644.3	0.0
E	2,738[2]	26	92	2.2	645.0	645.0	645.0	0.0

[1] Feet above mouth
[2] Feet above confluence with Crystal Creek Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

ILLINOIS AND MICHIGAN CANAL TRIBUTARY C
ILLINOIS AND MICHIGAN CANAL TRIBUTARY D
INDUSTRIAL TRIBUTARY