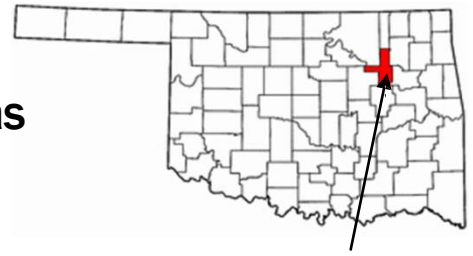
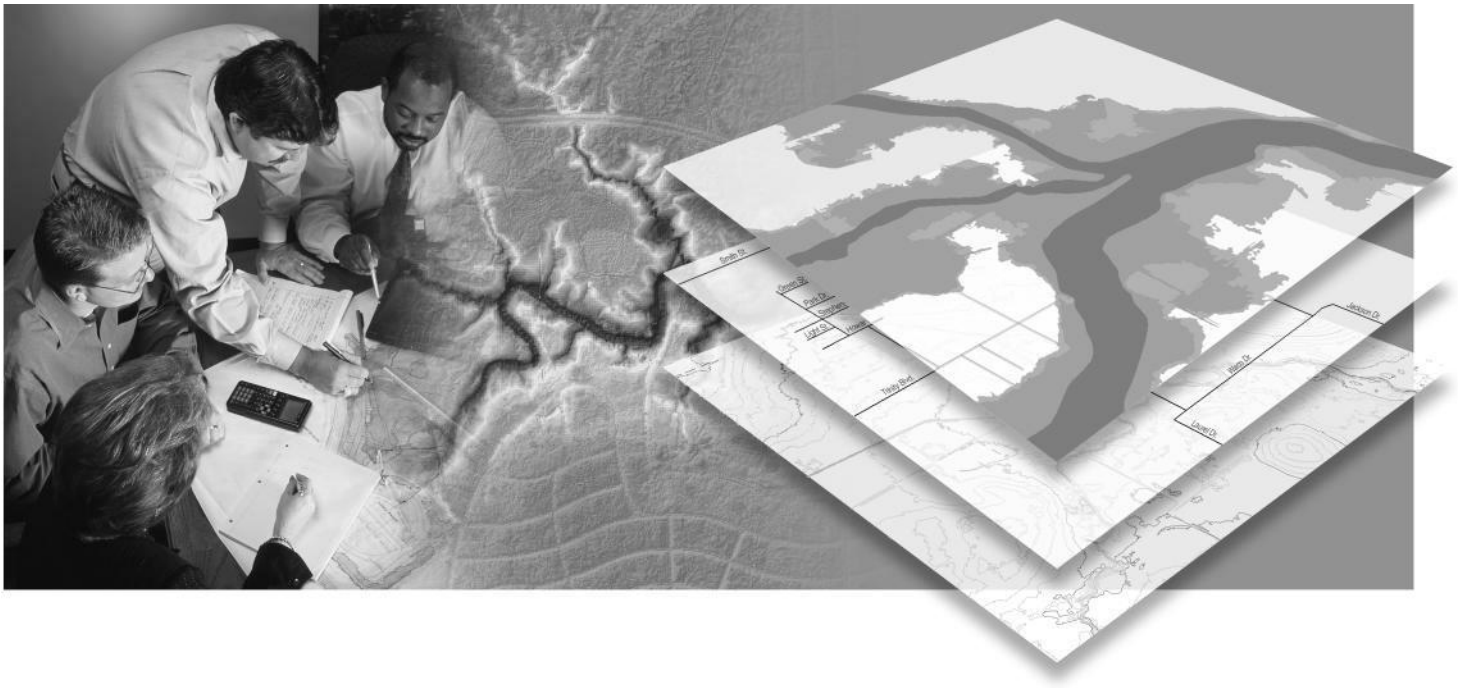
Flood Insurance Study

Tulsa County, Oklahoma and Incorporated Areas

VOLUME 2 of 8



Tulsa County



COMMUNITY NAME	COMMUNITY NO.
Bixby, City of	400207
Broken Arrow, City of	400236
Collinsville, City of	400360
Glenpool, City of	400208
Jenks, City of	400209
Lotsee, Village of [1]	400546
Owasso, City of	400210
Sand Springs, City of	400211
Sapulpa, City of	400053
Skiatook, Town of	400212
Sperry, Town of	400213
Tulsa, City of	405381
Tulsa County (Unincorporated Areas)	400462

[1] No Special Flood Hazard Areas Identified

Revised: September 12, 2024
FLOOD INSURANCE STUDY NUMBER
40143CV002F

FEMA

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

Users should refer to Section 10.0, Revision Description, for further information. Section 10.0 is intended to present the most up-to-date information for specific portions of this FIS report. Therefore, users of the FIS report should be aware that the information presented in Section 10.0 supersedes information in Section 1.0 through 9.0 of this FIS report.

Initial Countywide FIS Effective Date: September 22, 1999.

First Revised Countywide FIS Revision Date: Map revised September 7, 2001 to change base flood elevations, to change special flood hazard areas, to reflect updated topographic information, and to change floodway.

Second Revised Countywide FIS Revision Date: Map revised April 16, 2003 to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to revise vertical datum, to update roads and road names, to incorporate previously issued Letters of Map Revision, and to reflect updated topographic information.

Third Revised Countywide FIS Revision Date: Map revised August 3, 2009 to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to revise vertical datum, to update roads and road names, to incorporate previously issued Letters of Map Revision, and to reflect updated topographic information.

Fourth Revised Countywide FIS Revision Date: Map revised October 16, 2012 to change Special Flood Hazard Areas, to reflect updated topographic information, and to incorporate previously issued Letter of Map Revision.

Fifth Revised Countywide FIS Revision Date: Map revised September 30, 2016 to change Base Flood Elevations and Special Flood Hazard Areas, and to incorporate previously issued Letters of Map Revision.

Sixth Revised Countywide FIS Revision Date: Map revised May 2, 2019 to change Special Flood Hazard Areas to reflect new detailed modeling of Joe Creek and its tributaries and to incorporate previously issued Letters of Map Revision.

Seventh Revised Countywide FIS Revision Date: Map revised September 12, 2024 to change Special Flood Hazard Areas to reflect new detailed modeling of Brookhollow Creek and its tributaries, Haikey Creek, and Little Haikey Creek, and to incorporate a channelization project related to a newly accredited levee along Haikey Creek.

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EXHIBITS (Continued)

VOLUME 5
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10.0 REVISION DESCRIPTIONS

This section has been added to provide information regarding significant revisions made since the 2009 FIS was printed. Future revisions may be made that do not result in the republishing of the FIS report. To assure that the user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data listed on the FIRM Index.

10.1 October 16, 2012 Revision

This Physical Map Revision (PMR) revises the profiles and floodway data tables for the following streams; Adams Creek, Adams Creek Tributary E, Brook hollow Creek, East Branch of Haikey Creek, Elm Creek, Hager Creek, Jones Creek, Little Haikey Creek, Mingo Creek, Mooser Creek, Sand Springs Lake Tributary, Unnamed Tributary to West Branch Broken Arrow Creek and Vensel Creek South. These streams were revised due to incorporating new LOMRs. No new hydrology and hydraulics was done for this PMR. This work was completed by the Risk Assessment Mapping and Planning Partners (RAMPP) Joint Venture, for FEMA under Contract No. HSFEHQ-09-D-0369 and Task Order HSFE06-09-J-0002.

The existing detailed studies on the panels revised for this PMR in Tulsa County, OK were redelineated based on new topographic data provided by the City of Tulsa.

Base Map information shown on this FIRM was provided in digital format by the Mapping & Graphics Department of the Indian Nations Council of Governments (INCOG).

The projection used in the preparation of this map was Oklahoma State plane FIPS 3501 zone. The horizontal datum was NAD 83, GRS80 spheroid. Differences in the datum, spheroid projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. The differences do not affect the accuracy of the effective FIRMs.

The results of this study were reviewed at the final CCO meeting held on February 22, 2011, and attended by representatives of FEMA; the Oklahoma Water Resources Board (OWRB); Flanagan & Associates; Meshek & Associates; Muscogee (Creek) Nation; the Cities of Bixby, Broken Arrow, Collinsville, Glenpool, Jenks, Owasso, Sand Springs, Sapulpa, and Tulsa; The Town of Skiatook; Tulsa County; and the study contractor. All problems raised at that meeting have been addressed in this study.

Between cross sections, the boundaries were interpolated using detailed topographic information from the City of Broken Arrow, the City of Tulsa, and the USACE, Tulsa District (References 35-37, 69).

Along East Branch Haikey Creek, the discharges are lower downstream of Chestnut Avenue and higher downstream of Aspen Avenue as compared to the previously determined discharges. A summary of the revised drainage area-peak discharge relationships for the East Branch of Haikey Creek watershed is shown in Table 6, “Revised Summary of Discharges”.

Table 8, “Floodway Data,” and Exhibit 1, “Flood Profiles,” were revised to reflect changes as a result of the restudy. This revision also incorporates the determinations of Letters of Map Revision issued by FEMA for the projects listed by community in Table 7, “Letters of Map Revision.” These changes are also reflected in Table 8, “Floodway Data,” and Exhibit 1, “Flood Profiles.”

Table 6. Revised Summary of Discharges

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (Cubic Feet per Second) 10-percent	2-percent	1-percent	0.2-percent
EAST BRANCH HAIKEY CREEK					
Approximately 0.37 mile downstream of Chestnut Ave	2.74	1,232	2,532	3,380	5,835
Approximately 150 feet downstream of Aspen Ave	2.04	643	1,636	2,170	3,535
SAND SPRINGS LAKE TRIBUTARY					
At 81st West Avenue	2.22	*	*	2,728	*
UNNAMED TRIBUTARY TO WEST BRANCH BROKEN ARROW CREEK					
At confluence with West Branch Broken Arrow Creek	0.3	*	*	916	*

*Data not available

Table 7. Letters of Map Revision

Case No.	Date Issued	Project Identifier	Revised Map Panels	Affected Community
01-06-1190P	01/24/2002	City of Broken Arrow; A part of section 36, Township 19 North, Range	40143C0385	City of Broken Arrow, City of Tulsa
01-06-1178P	06/13/2002	Broken Arrow Golf & Athletic Club	40143C0385	City of Owasso, Tulsa County (Unincorporated Areas)
04-06-863P	09/01/2004	Douglas Creek Levee Improvements	40143C0261	City of Tulsa
04-06-345A	05/07/2007	Amberjack Subdivision, Block 2, A part of Lot 1	40143C0377	City of Tulsa
07-06-2371P	01/24/2008	Moose Creek (OK)	40143C0333, 40143C0334, 40143C0353	City of Tulsa, Tulsa County (Unincorporated Areas)
08-06-1820P	07/16/2008	Delaware Avenue Bridge	40143C0364	City of Tulsa
10-06-0594P	02/18/2010	West 77th Place South (Reissuance of LOMR 08-06-0093P)	40143C0342, 40143C0361	City of Tulsa
09-06-2072P	02/22/2010	Southbridge	40143C0434, 40143C0453	City of Bixby
10-06-0640P	02/24/2010	Jones Creek Channel Rehabilitation (Reissuance of 03-06-0541P)	40143C0244	City of Tulsa
10-06-0642P	02/25/2010	91st and Mingo intersection Improvements (Reissuance of 05-06-A125P)	40143C0367, 40143C0369, 40143C0386,	City of Tulsa
10-06-1223P	02/25/2010	Reissuance of 04-06-552P	40143C0386, 40143C0388	City of Tulsa
09-06-3069P	03/18/2010	Rushbrooke	40143C0389	City of Broken Arrow
10-06-0758P	03/31/2010	Sand Springs School Childhood Development Center	40143C0214	City of Sand Springs
09-06-2568P	04/30/2010	River's Edge Development	40143C0431, 40143C0432, 40143C0434	City of Bixby, City of Tulsa, Tulsa County (Unincorporated Areas)
10-06-2081P	07/30/2010	Mingo Road-51st Street LOMR (Reissuance of 03-06-1945P)	40143C0378	City of Tulsa
10-06-2150P	07/30/2010	Little Haikey Creek	40143C0367	City of Tulsa
11-06-0589P	02/04/2011	Unnamed Tributary to West Branch (Reissuance of 08-06-2075P)	40143C0393, 40143C0394	City of Broken Arrow
12-06-0566P	01/31/2012	Fairway Park (Reissuance of 05-06-0076P)	40143C0385	City of Broken Arrow

10.2 September 30, 2016 Revision

This Physical Map Revision (PMR) revises the profiles and floodway data tables for the following streams; Broken Arrow Creek, West Branch Broken Arrow Creek, Sequoyah Creek, Spunky Creek, Spunky Creek Tributary A, Spunky Creek Tributary B, Spunky Creek Tributary B-1, Spunky Creek Tributary G, Unnamed Tributaries 1, 2, 3 and 4 to West Branch Broken Arrow Creek. The Unnamed Tributary 3 to West Branch Broken Arrow Creek was studied in detail in the previous FIS study and it was called Unnamed Tributary to West Branch Broken Arrow Creek. No major flooding issues were reported along Broken Arrow Creek or its tributaries in recent years.

These streams were revised due to new hydrologic and hydraulic analyses performed for Broken Arrow Creek watershed. This work was completed by Oklahoma Water Resources Board (OWRB) as part of FEMA CTP Contact No. EMT-2011-CA-0007 in 2014.

The existing detailed studies on the panels revised for this PMR in Tulsa County, OK were redelineated based on new topographic LiDAR data acquired for this study. Base map information shown on this FIRM was provided in digital format by the City of Broken Arrow, the Geo Information Systems Department of the University of Oklahoma, the Indian Nations Council of Governments (INCOG), and the USDA FARM USDA Farm Service Agency's National Agriculture Imagery Program (NAIP).

The projection used in the preparation of this map was Oklahoma State plane FIPS 3501 zone. The horizontal datum was NAD 83, GRS80 spheroid. Differences in the datum, spheroid projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. The differences do not affect the accuracy of the effective FIRMs.

The base terrain data was developed from a new aerial LIDAR survey, performed for this project by Dewberry & Davis, of the detailed study areas. A summary of the Manning's n values are shown in Table 4, revised drainage area-peak discharge relationships for the stream studied in detail are shown in Table 6a, "Revised Summary of Discharges". Table 8, "Floodway Data," and Exhibit 1, "Flood Profiles," were revised to reflect changes as a result of the restudy. The flood profiles were determined for 10-, 4-, 2-, 1- and 0.2-percent annual chance storm. A summary of the revised drainage area-peak discharge relationships for the East Branch of Haikey Creek watershed based on the LOMR case number 12-06-3946P is shown in Table 6b.

This revision also incorporates Letter of Map Revision issued by FEMA for the project listed by community in Table 7a, ″Letters of Map Revision" These changes are also reflected in Table 8, ″Floodway Data", and Exhibit 1, "Flood Profiles". Table 7b shows the summary of stillwater elevations from this LOMR.

Table 6a. Revised Summary of Discharges

Flooding Source / Location	D.A. *(sq. mi.)*	10% *(cfs)*	2% *(cfs)*	1% *(cfs)*	0.20% *(cfs)*
Broken Arrow Creek (Main Stem)					
Confluence with the Arkansas River (Mouth)	18.62	6,639	10,532	12,630	17,410
Approximately 3700' Downstream of East 131st Street South	17.83	6,650	10,479	12,561	17,354
Downstream of Confluence with Broken Arrow Creek West Branch	17.61	6,637	10,458	12,542	17,347
Approximately 3300' Upstream of East 131st Street South	12.36	4,855	7,792	9,270	12,919
Approximately 1300' Upstream of E 121st Street South	11.62	4,897	7,730	9,217	12,788
Approximately 2000' Downstream of South 23rd Street	11.3	4,866	7,679	9,155	12,703
Approximately 1000' Upstream of South 23rd Street	10.94	4,856	7,666	9,132	12,663
Downstream of Confluence with Broken Arrow Creek Tributary	10.13	4,688	7,411	8,851	12,318
Upstream of East 101st Street South	3.17	2,013	3,168	3,744	5,374
Downstream of Strip Mine	3.1	2,003	3,153	3,726	5,346
Upstream of Strip Mine	2.86	2,119	3,232	3,779	5,294
Approximately 3000' Downstream of South 23rd Street	2.52	1,988	3,041	3,580	4,913
South 23rd Street	2.3	2,110	3,275	3,852	5,271
Approximately 700' Upstream of East 91st Street South	1.88	1,891	2,870	3,362	4,546
Approximately 2000' Upstream of East 91st Street South	1.44	1,304	2,025	2,410	3,347
Approximately 5000' Downstream of East 81st Street South	1.06	962	1,527	1,785	2,488
East 81st Street South	0.44	481	831	1,062	1,318
Approximately 3000' Upstream of East 81st Street South	0.18	312	492	584	805
West Branch Broken Arrow Creek					
Confluence with Broken Arrow Creek (Mouth)	4.85	2,660	4,101	4,963	6,985
Approximately 4600' Upstream of Confluence with Broken Arrow Creek	4.3	2,622	4,100	4,941	6,905
Approximately 1700' Downstream of East 121st Street South	3.98	2,644	4,170	5,016	6,966
Approximately 1000' Upstream of East 121st Street South	3.76	2,669	4,189	5,031	6,949
Approximately 5400' Upstream of East 121st Street South	3.28	2,623	4,090	4,906	6,762
Approximately 700' Downstream of South 9th Street	2.87	2,575	3,933	4,705	6,499
Approximately 600' Upstream of South 9th Street	2.67	2,429	3,716	4,455	6,135
Upstream of Confluence with Unnamed Tributary 1	2.13	2,113	3,272	3,959	5,427
Downstream of Confluence with Sequoyah Creek	1.9	1,986	3,113	3,776	5,195
Downstream of Confluence with Unnamed Tributary 2	1.32	1,245	2,056	2,481	3,233
Upstream of Confluence with Unnamed Tributary 2	1.09	1,176	1,940	2,342	3,051
Upstream of Confluence with Unnamed Tributary 3	0.68	933	1,492	1,785	2,431
Upstream of Confluence with Unnamed Tributary 4	0.26	583	886	1,041	1,411
Sequoyah Creek					
Confluence with Broken Arrow Creek West Branch (Mouth)	0.54	1,066	1,558	1,797	2,390
Approximately 600' Downstream of South Ash Court	0.38	939	1,372	1,585	2,088
Upstream of South Ash Court	0.2	525	747	854	1,104
Unnamed Tributary 1 to West Branch Broke n Arrow Creek					
Confluence with Broken Arrow Creek West Branch (Mouth)	0.43	1,040	1,520	1,751	2,253
Unnamed Tributary 2 to West Branch Broke n Arrow Creek					
Confluence with Broken Arrow Creek West Branch (Mouth)	0.23	339	503	575	735
Approximately 800' Upstream of South 9th Street	0.07	120	193	230	321
Unnamed Tributary 3 to West Branch Broke n Arrow Creek					
Confluence with Broken Arrow Creek West Branch (Mouth)	0.32	313	539	671	789
Unnamed Tributary 4 to West Branch Broke n Arrow Creek					
Confluence with Broken Arrow Creek West Branch (Mouth)	0.27	352	619	755	1,122
Approximately 400' Upstream of East 91st Street South	0.16	234	426	533	787

Table 6b. Revised Summary of Discharges

Flooding Source / Location	D.A. (sq. mi.)	10% (cfs)	2% (cfs)	1% (cfs)	0.20% (cfs)
East Branch Haikey Creek					
Upstream of the confluence with Haikey Creek	8.3	6,558	9,396	10,595	13,854
Approximately 100 feet upstream of the confluence of Middle Branch Haikey Creek	3.67	2,322	3,392	3,866	5,187
Approximately 100 feet downstream of Olive Street	3.48	2,264	3,307	3,761	5,041
Approximately 0.37 mile downstream of Chestnut Avenue	2.59	1,830	2,656	3,004	3,956
Approximately 150 feet downstream of Aspen Avenue	2.22	1640	2,376	2,680	3,502

Table 7a. Letters of Map Revision

Case No.	Date Issued	Project Identifier	Revised Map Panels	Affected Community
12-06-3946P	10/17/2012	City of Broken Arrow; Aspen Pond LOMR (Reissuance of 10-06-0428P)	40143C0391 40143C0393 40143C0389[1]	City of Broken Arrow

[1]Although a portion of LOMR 12-06-3946P falls within the scope of this map revision, panel 40143C0389 was not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM panel 40143C0389.

Table 7b. Summary of Stillwater Elevations from LOMR

Flooding Source And Location	Panel No	Elevation (Feet)			
		10%	2%	1%	0.2%
Pond A (City of Broken Arrow)	40143C0389 40143C0393	*	*	680.5	*
Pond BC (City of Broken Arrow)	40143C0393	*	*	681.3	*

* Data not available

10.3 May 2, 2019 Revision

This Physical Map Revision (PMR) revises the profiles and floodway data tables for the following streams: Joe Creek, East Branch Joe Creek, East Branch Joe Creek Split Flow, West Branch Joe Creek, Little Joe Creek, North Fork Little Joe Creek and South Fork Little Joe Creek.

These streams were revised due to new hydrologic and hydraulic analyses performed for the Polecat Creek watershed. This work was completed by Meshek & Associates, LLC as part of FEMA CTP Contact No. EMT-2013-CA-0002 in 4/1/2016.

The projection used in the preparation of this map was Oklahoma State plane FIPS 3501 zone. The horizontal datum was NAD 83, GRS80 spheroid. Differences in the datum, spheroid projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. The differences do not affect the accuracy of the effective FIRMs.

The base terrain data was developed from 2010 topographic data provided by the City of Tulsa of the detailed study areas. A summary of the Manning's n values are shown in Table 4, revised drainage area-peak discharge relationships for the stream studied in detail are shown in Table 6c, "Revised Summary of Discharges". Table 8, "Floodway Data," and Exhibit 1, "Flood Profiles," were revised to reflect changes as a result of the restudy. The flood profiles were determined for 10-, 4-, 2-, 1- and 0.2- percent annual chance storm.

This revision also incorporates Letter of Map Revision issued by FEMA for the project listed by community in Table 7c, ″Letters of Map Revision" These changes are also reflected in Table 8, ″Floodway Data", and Exhibit 1, "Flood Profiles".

A final CCO meeting was held on November 29, 2017 for the Polecat-Snake Physical Map Revision that included updates to Joe Creek, East Branch Joe Creek, East Branch Joe Creek Split Flow, West Branch Joe Creek, Little Joe Creek, North Fork Little Joe Creek, and South Fork Little Joe Creek. Attendees included the Oklahoma Water Resource Board, City of Tulsa's floodplain administrator and representatives, and FEMA's contractors to ensure all stakeholders were aware of the regulatory due process and the impacts associated with moving the study forward and developing final products. The City notified all affected stakeholders of pending changes to the Tulsa County Flood Insurance Study and associated flood hazard area.

Table 6c. Revised Summary of Discharges

Flooding Source / Location	D.A. *(sq. mi.)*	10% *(cfs)*	2% *(cfs)*	1% *(cfs)*	0.20% *(cfs)*
BELL CREEK					
At 37th Street	2.14	2,966	3,737	4,116	4,847
At Broken Arrow Expressway	0.89	1,867	2,312	2,728	3,085
BELL CREEK TRIBUTARY					
At 41st Street	0.94	871	1,151	1,265	1,507
At 46th Street	0.49	569	793	942	1,056
EAST BRANCH JOE CREEK					
852' upstream of S Harvard Avenue	2.98	3,524	4,715	5,258	6,186
Downstream of E 47th Street	2.94	3,513	4,676	5,126	6,129
73' upstream of E 47th Street	2.93	3,510	4,671	5,121	6,123
556' upstream of E 47th Street	2.9	3,500	4,657	5,107	6,106
1167' upstream of E 47th Street	2.61	520	1,534	1,986	3,122
Downstream of S Louisville Avenue	2.52	689	1,663	2,106	3,252
635' upstream of S Louisville Avenue	2.49	1,275	2,237	2,676	3,815
Downstream of E 41st Street	2.4	1,355	2,315	2,714	3,861
460' upstream of E 41st Street	2.26	1,474	2,092	2,411	3,758
603' upstream of E 41st Street	2.26	1,474	2,092	2,411	3,758

703' upstream of E 41st Street	1.9	821	1,476	1,738	2,958
435' downstream of S Urbana Avenue	1.9	821	1,476	1,738	2,958
Downstream of S Sandusky Avenue	1.36	73	457	693	1,778
55' downstream of E 36th Street	0.48	65	369	522	827
Upstream of East 33rd Street	0.41	173	447	601	877
EAST BRANCH JOE CREEK SPLIT FLOW					
1563' upstream of the split flow reach confluence with West Branch	*	0	813	1,200	2,199
FULTON CREEK					
At 93rd East Avenue	0.95	1,707	2,188	2,517	4,361
A 38th Street	0.66	1,488	1,959	2,181	2,678
JOE CREEK					
At Pedestrian Bridge location in Manion Park	10.89	12,802	16,644	17,579	18,175
272' upstream of Pedestrian Bridge at Manion Park	10.85	12,763	16,642	17,568	18,182
Downstream of Little Joe Creek confluence with Joe Creek	10.75	12,700	16,716	18,146	20,570
Downstream of E 51st Street	5.17	5,277	7,037	7,695	9,118
At the confluence of East Branch and West Branch upstream of Interstate-44.	5.04	5,170	6,989	7,631	9,061
LITTLE JOE CREEK					
Downstream of Harvard Avenue	4.2	5,801	8,174	9,024	10,487
35' upstream of S Harvard Avenue	4.18	5,773	8,133	8,976	10,448
203' upstream of S Louisville Avenue	4.08	5,708	8,043	8,873	10,432
26' Upstream of S New Haven Avenue	3.92	5,400	7,640	8,444	9,963
248' upstream of S New Haven Avenue	3.91	5,391	7,625	8,431	10,015
950' upstream of S New Haven Avenue	3.34	4,428	6,417	7,178	8,777
Upstream of pedestrian bridge near S Toledo Avenue	3.32	4,413	6,394	7,157	8,767
Downstream of North Fork Little Joe Creek confluence.	3.24	4,316	6,250	6,990	8,561
400' downstream of S Yale Avenue	2.46	3,170	4,867	5,525	6,978
Downstream of S Yale Avenue	2.46	3,170	4,867	5,525	6,978
Upstream of S Yale Avenue	1.58	2,235	2,813	3,072	3,865
750' upstream of S Yale Avenue	1.53	2,221	2,787	3,050	3,848
1452' downstream of S Hudson Avenue	1.5	2,211	2,770	3,035	3,824
385' downstream of S Hudson Avenue	1.43	2,180	2,722	2,987	3,750
Upstream of S Hudson Avenue	1.39	2,133	2,665	2,924	3,656
Upstream of S Joplin Avenue	1.15	1,930	2,427	2,672	3,236
555' downstream of E 54th Street	0.98	1,844	2,341	2,561	2,974
Upstream of E 54th Street	0.96	1,885	2,383	2,597	2,992
Downstream of S Sheridan Road	0.95	1,898	2,403	2,618	3,003
Upstream of S Sheridan Road	0.73	79	107	120	455
NORTH FORK LITTLE JOE CREEK					
132' upstream of S Yale Avenue	0.73	1,195	1,531	1,772	2,241
At detention spillway 335' upstream of S Yale Avenue	0.69	1,161	1,506	1,744	2,202
Downstream of E 51st Street	0.66	1,194	1,569	1,768	2,171
Upstream of E 51st Street	0.55	892	1,381	1,559	1,901
SOUTH FORK JOE CREEK					
At confluence with Joe Creek	1.30	1,445	2,183	2,398	2,969
South Harvard Avenue	0.80	867	1,405	1,519	1,791
South New Haven Avenue	0.60	752	1,189	1,285	1,538
SOUTH FORK LITTLE JOE CREEK					
1743' upstream of confluence with Little Joe Creek	0.8	0	0	0	0
2838' downstream of S Hudson Avenue	0.62	1,249	1,765	2,037	2,503
2026' downstream of S Hudson Avenue	0.57	1,190	1,668	1,930	2,349
1214' downstream of S Hudson Avenue	0.46	962	1,360	1,569	1,919
435' downstream of S Hudson Avenue	0.43	916	1,299	1,493	1,825
226' upstream of S Hudson Avenue	0.39	847	1,204	1,381	1,687
WEST BRANCH JOE CREEK					
328' upstream of E Skelly Drive	5.04	5,170	6,989	7,631	9,061
50' upstream of E 48th Street	1.88	0	272	356	858
570' upstream of E 47th Street	1.78	148	207	236	841
353' upstream of E 45th Street	1.71	0	64	219	837
400' upstream of E 44th Street	1.55	0	251	443	985

122' downstream of E 41st Street	1.49	111	567	713	1,179
820' upstream of E 41st Street	1.44	467	839	964	1,468
312' downstream S Florence Avenue	1.3	386	547	618	1,390
155' upstream of E 38th Street	1.13	65	340	587	1,292
90' downstream of E 36th Street	1.08	50	353	627	1,334
46' downstream of E 33rd Street	0.83	191	533	757	1,370
775' downstream of E 31st Street	0.73	106	424	630	1,168
90' downstream of E 31st Street	0.69	46	392	606	1,146
320' upstream of E 31st Street	0.57	0	64	225	673
E 28th Street	0.45	872	1,027	1,128	1,431

Table 7c. Letters of Map Revision

Case No.	Date Issued	Project Identifier	Revised Map Panels	Affected Community
12-06-3954P	10/17/2012	South Fork Joe Creek Drainage Improvements	40143C0354M[1] 40143C0358M	City of Tulsa
17-06-0933P	9/11/2017	Bell – Fulton Restudy	40143C0357L[2] 40143C0359M 40143C0376L[2]	City of Tulsa, Tulsa County

[1]LOMR 12-06-3954P was fully incorporated but partially superseded due to the Polecat Creek Watershed study, completed 4/1/2016.

[2]Although a portion of LOMR 17-06-0933P falls within the scope of this map revision, panel 40143C0357L and 40143C0376L were not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM panels 40143C0357L and 40143C0376L.

10.4 September 12, 2024 Revision

This Physical Map Revision (PMR) revises the profiles and floodway data tables for the following streams: Brookhollow Creek, Brookhollow Creek Overflow, Brookhollow Creek Tributary, Diversion Channel (DC), Flood Relief Channel (FRC), Haikey Creek, Interior Drainage, Little Haikey Creek, and Tributary to Brookhollow Creek Tributary.

These streams were revised due to new hydrologic and hydraulic analyses performed for the Brookhollow Creek and Little Haikey Creek watersheds. This work was completed by Meshek & Associates, LLC as part of the Oklahoma Water Resources Board's (OWRB) Cooperating Technical Partnership (CTP) FEMA Contact No. EMT-2016-CA-00009 and EMT-2016-CA00010, respectively.

Haikey Creek, Diversion Channel (DC), Flood Relief Channel (FRC), and Interior Drainage were revised as the result of a channelization and levee construction project led by CGA Engineers, Inc. and HISINC, L.L.C. The project consisted of approximately 26,200 linear feet of re-channelization on the main stem of Haikey Creek, 7,700 linear feet of re-channelization on the new Diversion Channel (DC), 2,750 linear feet of re-channelization of the Flood Relief Channel (FRC) and 9,280 linear feet of new levee. The revision removes approximately 900 acres of land that may be used as residential and commercial development. The new levee structure was filed in accordance with FEMA requirements as outlined in 44CFR 65.10. More information on the 316-PMR for this Haikey Creek revision and levee construction can be found under MIP Case Number 20-06-3683P.

The projection used in the preparation of this map was State Plane Oklahoma North FIPS 3501 zone. The horizontal datum was NAD 83, GRS80 spheroid. Differences in the datum, spheroid projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. The differences do not affect the accuracy of the effective FIRMs.

The base terrain data was developed from 2015 and 2017 topographic data provided by the City of Tulsa of the detailed study areas. A summary of the Manning's n values are shown in Table 4, revised drainage area-peak discharge relationships for the stream studied in detail are shown in Table 6d, "Revised Summary of Discharges". Table 8, "Floodway Data," and Exhibit 1, "Flood Profiles," were revised to reflect changes as a result of the restudy. The flood profiles were determined for 10-, 4-, 2-, 1- and 0.2- percent annual chance storm.

This revision also incorporates Letter of Map Revision issued by FEMA for the project listed by community in Table 7d, ″Letters of Map Revision" These changes are also reflected in Table 6d. "Revised Summary of Discharges", Table 8, "Floodway Data", and Exhibit 1, "Flood Profiles".

For the September 12, 2024 Brookhollow Creek and Little Haikey Creek watersheds revision, a Project Discovery meeting was held on June 24, 2014, and attended by representatives of FEMA, the communities, Chamber of Commerce representatives from Tulsa and Skiatook, Oklahoma Water Resources Board (OWRB), and the study contractor to gather information about the current flood risk information and identify areas that needs to be restudied. A Consultation Coordination Officer (CCO) Meeting was held on December 15, 2020, and attended by representatives of FEMA, the communities, OWRB to discuss next steps in moving from preliminary to final mapping.

Table 6d. Revised Summary of Discharges

Flooding Source / Location	D.A. (sq. mi.)	10% (cfs)	4% (cfs)	2% (cfs)	1% (cfs)	1% + (cfs)	0.2% (cfs)
BELL CREEK							
At 37th Street	2.14	2,966	*	3,737	4,116	*	4,847
At Broken Arrow Expressway	0.89	1,867	*	2,312	2,728	*	3,085
BELL CREEK TRIBUTARY							
At 41st Street	0.94	871	*	1,151	1,265	*	1,507
At 46th Street	0.49	569	*	793	942	*	1,056
BROOKHOLLOW CREEK							
375' DS of S 145th E. Ave..	1.23	697	1,090	1,575	2,124	2,966	3,546
475' US of 137th E. Ave.	1.56	878	1,271	1,740	1,989	1,952	1,998
80' US of 137th E. Ave.	2.20	1,292	1,985	2,560	3,068	3,730	4,147
155' US of S Garnett Rd.	3.18	2,166	2,511	2,840	3,206	3,721	4,011
40' DS of confluence with Brookhollow Creek Tributary	4.58	3,503	4,534	5,172	5,763	6,598	7,034
200' DS of S Mingo Rd.	4.89	2,519	2,774	2,919	3,110	3,397	3,593
BROOKHOLLOW CREEK TRIBUTARY							
310' S of E 34th St. S	0.17	354	467	555	649	796	938
10' DS of confluence with Tributary to Brookhollow Creek Tributary	0.77	696	1,137	1,558	1,997	2,536	3,022
360' US of S Garnett Rd.	1.13	1,191	1,574	1,881	2,253	2,884	3,342
145' US of E 31st St. S	1.29	1,419	1,871	2,190	2,530	2,969	3,474
EAST BRANCH HAIKEY CREEK							
Upstream of the confluence with East Creek	8.30	6,558	*	9,396	10,595	*	13,854
Approximately 100 feet upstream of the confluence of Middle Branch Haikey Creek	3.67	2,322	*	3,392	3,866	*	5,187
Approximately 100 feet downstream of Olive Street	3.48	2,264	*	3,307	3,761	*	5,041
Approximately 0.37 mile downstream of Chestnut Avenue	2.74	1,232	*	2,532	3,380	*	5,835
Approximately 150 feet downstream of Aspen Avenue	2.04	643	*	1,636	2,170	*	3,502
FRY DITCH NO.1 TRIBUTARY							
Downstream of East 121st Street	0.8	598	*	868	985	*	1,283
FULTON CREEK							
At 93rd Street	0.95	1,707	*	2,188	2,517	*	4,361
At 38th Street	0.66	1,488	*	1,959	2,181	*	2,678

Flooding Source / Location	D.A.	10%	4%	2%	1%	1%+	0.2%
	(sq. mi.)	*(cfs)*	*(cfs)*	*(cfs)*	*(cfs)*	*(cfs)*	*(cfs)*
LITTLE HAIKEY CREEK							
Approximately 385 feet downstream of South Memorial Drive	2.79	1,540	*	3,110	3,960	*	6,260
40' US of S. 92nd E. Ave.	3.58	2,906	3,838	4,619	5,469	6,807	7,708
60' US of E. 91st St. S.	4.08	3,084	4,091	4,904	5,788	7,109	8,080
70' US of S. 97th E. Ave.	4.15	3,091	4,096	4,914	5,792	7,023	7,951
15' US of S. 97th E. Ave.	4.20	3,105	4,113	4,933	5,812	7,033	7,949
670' US of HWY 169	4.37	3,146	4,164	4,995	5,871	7,089	7,994
200' US of HWY 169	4.81	3,316	4,368	5,242	6,123	7,385	8,296
20' US of Creek TPKE E. Ramp	4.91	3,318	4,373	5,246	6,120	7,414	8,333
530' DS of Creek TPKE E. Ramp	4.97	3,330	4,387	5,263	6,137	7,435	8,383
550’ DS of Creek TPKE E. Ramp	5.04	3,332	4,377	5,245	6,111	7,415	8,363
570’ US of E. 101st St. S.	5.08	3,341	4,387	5,255	6,114	7,417	8,373
400’ US of E. 101st St. S.	5.19	3,353	4,406	5,278	6,139	7,447	8,447
10' US of E. 101st St. S.	5.40	3,375	4,441	5,319	6,185	7,510	8,568
410’ DS of E. 101st St. S.	5.45	3,379	4,446	5,324	6,193	7,530	8,592
490’ DS of E. 101st St. S.	5.47	3,378	4,447	5,325	6,194	7,537	8,601
630’ DS of E. 101st St. S.	5.52	3,382	4,452	5,330	6,201	7,555	8,622
1,000’ DS of E. 101st St. S.	5.58	3,384	4,458	5,338	6,209	7,576	8,648
700’ US of E. 111th St. S.	5.72	3,390	4,477	5,360	6,238	7,636	8,718
550’ US of E. 111th St. S.	5.83	3,406	4,498	5,385	6,271	7,696	8,783
420’ US of E. 111th St. S.	5.96	3,419	4,516	5,406	6,296	7,747	8,843

Flooding Source / Location	D.A. (sq. mi.)	10% (cfs)	4% (cfs)	2% (cfs)	1% (cfs)	1%+ (cfs)	0.2% (cfs)
BROOKHOLLOW CREEK TRIBUTARY							
1130' US of S 131st E. Ave.	0.30	392	584	756	906	1,120	1,263
80' US of S 129th E. Ave.	0.48	414	779	1,048	1,290	1,570	1,811
520' US of confluence with Brookhollow Creek Tributary	0.53	430	796	1,066	1,314	1,638	1,897

Table 7d. Letters of Map Revisions

Case No.	Date Issued	Project Identifier	Revised Map Panels	Affected Community
12-06-3946P	10/17/2012	Aspen Pond LOMR (Reissuance of 10-06-0428P)	40143C0389M 40143C0391L [1] 40143C0393M [1]	City of Broken Arrow
11-06-0831P	12/31/2012	Village of Tulsa	40143C0386M 40143C0387L [2]	City of Broken Arrow, City of Tulsa
14-06-3286P	6/22/2015	Rushbrooke Slab Deck Design on South Nyssa Avenue	40143C0389M	City of Broken Arrow
16-06-2420P	8/14/2017	Residences at Boardwalk	40143C0432M	City of Bixby
17-06-0933P	9/11/2017	Bell-Fulton Restudy	40143C0357L [3] 40143C0359M [4] 40143C0376M	City of Tulsa
18-06-3174P	7/9/2020	Regent Prep School, Tulsa, OK	40143C0367L	City of Tulsa
19-06-2128P	3/12/2020	Willow Creek Estates	40143C0432M 40143C0451M 40143C0453M	City of Bixby

[1] Panels 40143C0391L and 40143C0393M were revised in the September 30, 2016 revision.

[2] Although a portion of LOMR 11-06-0831P falls within the scope of this map revision, panel 40143C0387L was not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM panel 40143C0387L.

[3] Although a portion of LOMR 17-06-0933P falls within the scope of this map revision, panel 40143C0357L was not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM panel 40143C0357L.

[4] Panel 40143C0359L was revised in the May 2, 2019 revision.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Adams Creek								
AH	1,700	108	977	6.9	665.0	665.0	665.8	0.8
AI	4,800	280	792	3.8	675.4	675.4	675.7	0.3
AJ	9,250	294	773	4.8	687.4	687.4	688.4	0.8

[1]Feet above county line

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ADAMS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (NAVD)	WITHOUT FLOODWAY (NAVD)	WITH FLOODWAY (NAVD)	INCREASE (FEET)
Adams Creek Tributary E								
A	660	145	713	4.9	666.0	666.0	666.0	0.0
B	1,564	92	561	6.2	669.0	669.0	670.0	1.0
C	2,360	112	519	6.7	674.9	674.9	675.3	0.4
D	5,449	482	4,941	1.8	682.5	682.5	682.5	0.0
E	5,614	732	2,560	1.0	684.8	684.8	685.8	1.0
F	6,348	291	713	3.4	685.2	685.2	686.0	0.8
G	8,427	67	275	6.8	693.0	693.0	693.6	0.6
H	9,656	53	221	8.4	700.1	700.1	700.2	0.1
I	11,500	170	575	3.2	699.0	699.0	700.0	1.0

[1]Feet above confluence with Adams Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ADAMS CREEK TRIBUTARY E

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Alsuma Creek								
A	3,677	54	313	4.3	670.9	670.9	670.9	0.0
B	4,017	54	307	4.4	671.0	671.0	671.0	0.0
C	4,285	36	178	7.6	671.0	671.0	671.0	0.0
D	4,945	33	147	9.2	671.1	671.1	671.1	0.0
E	5,175	49	245	5.5	676.7	676.7	677.1	0.4
F	5,485	30	190	7.2	676.7	676.7	676.9	0.2
G	5,865	31	126	10.7	676.6	676.6	676.7	0.1

[1]Feet above confluence with Mingo Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ALSUMA CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Anderson Creek								
A	485	125	1,071	9.1	654.7	654.7	655.6	0.9
B	1,145	127	1,425	6.8	659.8	659.8	660.2	0.4
C	1,940	233	2,580	3.8	662.1	662.1	663.0	0.9
D	2,690	195	1,791	5.5	663.5	663.5	664.4	0.9
E	3,390	205	1,894	5.2	666.8	666.8	667.3	0.5
F	3,990	190	1,705	5.7	668.7	668.7	669.5	0.8
G	4,710	185	1,517	6.4	671.8	671.8	672.2	0.4
H	5,925	195	1,915	5.1	675.1	675.1	675.9	0.8
I	7,055	165	1,451	6.7	681.4	681.4	681.4	0.0
J	7,900	165	2,063	4.7	685.3	685.3	685.3	0.0
K	8,730	175	1,733	5.6	688.0	688.0	688.1	0.1
L	9,795	235	4,737	2.1	702.0	702.0	702.9	0.9
M	10,500	235	3,953	2.5	702.2	702.2	703.2	1.0
N	11,215	250	2,761	3.5	702.8	702.8	703.7	0.9
O	12,280	575	4,168	2.3	710.8	710.8	711.8	1.0
P	12,830	450	3,298	3.0	712.1	712.1	713.0	0.9
Q	13,410	507	3,044	3.2	713.5	713.5	714.3	0.8
R	14,400	616	4,276	2.3	714.8	714.8	715.7	0.9
S	15,325	570	3,317	2.9	716.1	716.1	717.0	0.9
T	15,980	588	3,244	2.5	717.6	717.6	718.2	0.6

[1]Feet above confluence with Fisher Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ANDERSON CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Anderson Creek (cont.)								
U	16,710	565	2,682	3.1	719.2	719.2	719.8	0.6
V	17,670	575	2,084	4.0	722.8	722.8	723.2	0.4
W	18,440	525	2,055	4.0	726.3	726.3	726.8	0.5
X	20,725	528	2,620	2.7	731.7	731.7	732.1	0.4
Y	22,040	377	1,846	3.9	734.8	734.8	736.1	1.3
Z	22,870	367	2,590	2.4	737.2	737.2	738.2	1.0
AA	23,560	190	1,039	3.9	738.9	738.9	739.9	1.0
AB	24,230	115	759	5.4	741.9	741.9	742.2	0.3
AC	24,945	200	1,253	3.2	744.7	744.7	745.0	0.3

[1] Feet above confluence with Fisher Creek

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Anderson Creek Tributary								
A	700	116	383	5.6	736.9	736.9	737.0	0.1
B	2,440	82	479	4.5	748.4	748.4	749.3	0.9
C	3,000	116	590	3.7	750.5	750.5	751.3	0.8
D	4,150	135	693	3.1	757.0	757.0	758.0	1.0
E	5,050	118	658	3.3	760.2	760.2	760.7	0.5
F	5,950	100	419	5.2	764.8	764.8	765.5	0.7
G	7,000	66	295	3.3	773.5	773.5	774.1	0.6
H	7,585	70	209	4.7	777.0	777.0	777.5	0.5
I	7,990	105	252	3.9	781.3	781.3	781.4	0.1
J	8,477	94	192	5.1	787.0	787.0	787.8	0.8

[1]Feet above confluence with Anderson Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ANDERSON CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Anderson Creek Tributary A-1								
A	20	20	83	6.2	767.9	767.9	768.9	1.0
B	330	35	123	4.2	773.1	773.1	773.1	0.0
C	665	35	97	5.3	775.3	775.3	775.7	0.4
D	1,000	32	87	5.9	780.0	780.0	780.4	0.4
E	1,310	36	108	4.7	784.7	784.7	785.3	0.6

[1]Feet above confluence with Anderson Creek Tributary.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ANDERSON CREEK TRIBUTARY A-1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Arkansas River								
A	211,087	2,543	36,349	5.6	581.5	581.5	582.0	0.5
B	218,866	2,290	35,339	5.8	583.3	583.3	583.8	0.5
C	226,409	2,196	33,859	6.1	586.2	586.2	586.6	0.4
D	231,267	2,186	37,193	5.5	588.1	588.1	588.6	0.5
E	238,413	3,773	47,142	4.4	591.4	591.4	592.2	0.8
F	246,490	1,580	26,016	7.9	594.3	594.3	594.8	0.5
G	259,140	2,193	42,773	4.8	598.6	598.6	599.6	1.0
H	265,972	1,898	38,741	5.3	601.7	601.7	602.4	0.7
I	273,377	1,837	41,986	4.9	604.9	604.9	605.7	0.8
J	279,421	1,991	40,189	5.1	606.3	606.3	606.9	0.6
K	284,397	2,198	39,445	5.2	607.8	607.8	608.3	0.5
L	291,605	1,822	38,526	5.3	610.2	610.2	610.6	0.4
M	293,824	2,137	40,318	5.1	610.9	610.9	611.2	0.3
N	297,138	2,492	40,236	5.1	611.8	611.8	612.1	0.3
O	298,677	1,625	31,984	6.4	612.2	612.2	612.6	0.4
P	300,185	1,330	28,165	7.3	612.8	612.8	613.1	0.3
Q	303,769	1,867	38,078	5.4	614.4	614.4	614.7	0.3
R	306,246	1,791	36,325	5.6	615.0	615.0	615.3	0.3
S	311,317	2,300	37,283	5.5	616.3	616.3	616.5	0.2
T	315,641	1,813	33,467	6.1	618.1	618.1	618.3	0.2
U	318,624	1,752	32,511	6.3	619.0	619.0	619.2	0.2
V	322,621	1,710	31,832	6.4	621.5	621.5	621.6	0.1

[1] Feet above river mile 457.7

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ARKANSAS RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Arkansas River (cont.)								
W	326,058	1,770	31,448	6.5	623.1	623.1	623.2	0.1
X	328,244	2,012	38,071	5.4	624.4	624.4	624.5	0.1
Y	333,876	1,605	29,181	7.0	626.1	626.1	626.2	0.1
Z	337,952	1,481	24,572	8.3	627.8	627.8	627.9	0.1
AA	339,414	1,419	25,990	7.9	629.3	629.3	629.4	0.1
AB	340,498	1,431	23,628	8.7	631.1	631.1	631.2	0.1
AC	346,270	1,341	18,877	10.9	633.6	633.6	633.6	0.0
AD	352,699	1,672	28,781	7.1	637.8	637.8	637.8	0.0
AE	362,638	1,286	25,391	8.1	641.1	641.1	641.1	0.0
AF	367,623	1,487	29,907	6.9	643.3	643.3	643.4	0.1
AG	371,146	1,432	29,501	7.0	644.4	644.4	644.5	0.1
AH	375,071	1,253	25,193	8.1	645.8	645.8	645.9	0.1
AI	380,048	2,045	38,607	5.3	648.3	648.3	648.4	0.1
AJ	383,534	1,758	32,692	6.3	649.0	649.0	649.1	0.1
AK	386,128	1,720	33,472	6.1	649.9	649.9	650.0	0.1
AL	391,734	1,993	36,052	5.7	651.4	651.4	651.5	0.1
AM	397,272	1,500	29,316	7.0	652.7	652.7	652.8	0.1
AN	401,300	1,992	38,492	5.3	654.3	654.3	654.4	0.1
AO	405,251	2,289	44,344	4.6	655.1	655.1	655.2	0.1
AP	409,051	2,252	37,880	5.4	656.4	656.4	656.5	0.1

[1] Feet above river mile 457.7

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ARKANSAS RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Arkansas River (cont.)								
AQ	411,860	2,414	43,404	4.7	657.3	657.3	657.4	0.1
AR	415,552	1,968	36,166	5.7	658.2	658.2	658.3	0.1
AS	420,001	970	17,296	11.9	659.8	659.8	659.9	0.1
AT	425,169	1,131	27,291	7.5	664.8	664.8	664.9	0.1
AU	429,064	1,095	28,902	7.1	655.5	665.5	665.9	0.4

[1] Feet above river mile 457.7

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ARKANSAS RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Audubon Creek								
A	720	83	731	8.2	637.2	637.2[2]	637.2	0.0
B	1,350	64	413	14.5	637.2	637.0[2]	637.0	0.0
C	2,500	64	408	14.2	640.6	640.6	640.6	0.0
D	4,500	61	352	13.7	648.0	648.0	648.0	0.0
E	8,480	183	889	4.2	662.9	662.9	662.9	0.0
F	9,820	78	542	6.2	670.2	670.2	670.2	0.0

[1] Feet above confluence with Mingo Creek.
[2] Water-surface elevations computed without consideration of backwater effects from Mingo Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

AUDUBON CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bell Creek								
A	299	61	649	10.2	644.2	644.2	645.0	0.8
B	3,001	76	510	8.0	651.6	651.6	652.2	0.6
C	4,132	40	326	7.7	656.0	656.0	656.4	0.4
D	4,999	48	273	9.2	660.1	660.1	660.2	0.1
E	5,906	33	439	6.2	668.5	668.5	668.6	0.1

[1] Feet above confluence with Mingo Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BELL CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bell Creek Tributary								
A	577	68	496	2.6	655.5	655.5	656.4	0.9
B	1,264	67	540	2.3	655.8	655.8	656.7	0.9
C	2,386	130	1,609	1.3	663.6	663.6	663.6	0.0
D	3,350	35	201	4.7	664.6	664.6	664.8	0.2
E	5,547	81	275	0.3	674.7	674.7	674.7	0.0
F	5,869	150	766	1.3	674.7	674.7	647.7	0.0

[1] Feet above confluence with Bell Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BELL CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Berryhill Creek								
A	775	100	1,003	9.6	636.9	636.9	637.0	0.1
B	1,655	110	1,361	7.1	639.3	639.3	639.6	0.3
C	3,077	154	1,241	7.8	646.5	646.5	646.5	0.0
D	4,272	318	2,077	4.7	649.1	649.1	649.6	0.5
E	4,888	559	1,621	6.0	651.1	651.1	651.0	-0.1
F	5,566	338	2,002	4.7	653.2	653.2	653.4	0.2
G	6,349	431	2,030	4.6	654.8	654.8	655.3	0.5
H	7,014	282	1,368	6.8	656.3	656.3	656.9	0.6
I	7,709	403	1,810	4.8	658.2	658.2	659.2	1.0
J	9,346	523	2,643	1.2	666.3	666.3	666.7	0.4
K	9,945	240	695	4.7	666.3	666.3	666.8	0.5
L	10,748	107	454	6.1	671.3	671.3	671.4	0.1
M	11,344	97	457	6.1	673.4	673.4	673.8	0.4
N	11,924	109	440	4.8	675.4	675.4	676.3	0.9
O	12,629	72	379	5.6	681.0	681.0	681.1	0.1
P	13,224	44	304	6.9	685.0	685.0	684.9	-0.1
Q	13,663	52	351	6.0	687.5	687.5	687.6	0.1
R	14,163	63	369	5.7	688.3	688.3	688.9	0.6
S	14,611	89	377	5.6	689.4	689.4	690.3	0.9
T	15,009	90	300	7.0	691.5	691.5	692.5	1.0

[1]Feet above confluence with Arkansas River.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BERRYHILL CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Berryhill Creek (cont)								
U	15,558	200	716	2.9	694.5	694.5	695.5	1.0
V	16,554	57	211	10.0	701.4	701.4	701.5	0.1
W	16,911	82	404	3.3	704.0	704.0	704.8	0.8
X	18,068	77	185	7.2	707.6	707.6	707.9	0.3
Y	18,658	85	320	4.2	710.9	710.9	711.5	0.6
Z	18,950	78	251	5.4	711.6	711.6	712.5	0.9
AA	19,399	56	207	6.5	714.1	714.1	714.9	0.8

[1]Feet above confluence with Arkansas River.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BERRYHILL CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Berryhill Creek Tributary								
A	72	109	561	9.6	666.3	662.7[2]	663.1	0.4
B	566	116	633	8.5	666.3	665.5[2]	666.2	0.7
C	1,100	226	1,018	5.3	669.5	669.5	669.6	0.1
D	1,574	161	635	7.4	672.9	672.9	673.9	1.0
E	2,184	128	780	6.0	676.9	676.9	677.8	0.9
F	2,658	241	985	3.2	677.9	677.9	678.9	1.0
G	2,930	81	417	7.5	678.3	678.3	679.0	0.7
H	3,608	76	498	6.3	681.3	681.3	682.1	0.8
I	3,997	58	304	10.3	683.1	683.1	683.3	0.2
J	4,741	319	1,549	2.0	685.5	685.5	686.0	0.5
K	5,255	61	274	11.4	687.6	687.6	687.6	0.0
L	5,789	109	586	5.3	691.2	691.2	692.2	1.0
M	6,161	57	253	12.4	693.4	693.4	693.1	-0.3
N	6,571	93	635	4.9	696.3	696.3	696.6	0.3
O	7,070	63	223	9.3	697.2	697.2	697.2	0.0
P	7,335	49	290	7.1	699.3	699.3	699.6	0.3
Q	7,732	45	198	10.4	704.0	704.0	704.1	0.1

[1]Feet above confluence with Berryhill Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BERRYHILL CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bigheart Creek								
A	1,040	1,198	2,717	5.3	637.4	637.4[2]	638.4	1.0
B	1,600	625	2,231	6.5	637.8	637.8[2]	638.6	0.8
C	2,400	484	2,361	6.1	638.9	638.9[2]	639.4	0.5
D	2,815	264	1,350	11.0	638.9	638.9[2]	639.4	0.5
E	3,620	663	8,246	1.6	656.8	656.8	656.8	0.0
F	4,820	255	3,264	1.2	659.0	659.0	659.0	0.0
G	5,295	181	1,740	2.3	659.0	659.0	659.0	0.0
H	5,830	121	1,186	3.4	659.1	659.1	659.4	0.3
I	6,495	190	1,630	2.4	659.4	659.4	660.4	1.0
J	6,925	200	1,444	2.8	659.7	659.7	660.7	1.0
K	7,615	280	1,295	3.1	661.6	661.6	662.6	1.0
L	8,360	143	766	5.2	663.6	663.6	664.6	1.0
M	8,690	170	1,073	3.7	668.7	668.7	669.0	0.3
N	9,340	245	1,207	3.3	669.6	669.6	670.0	0.4
O	10,490	125	546	7.3	674.3	674.3	675.1	0.8

[1]Feet above confluence with Arkansas River.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIGHEART CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek								
A	49,733	2,818	31,039	2.3	585.5	585.5	586.5	1.0
B	52,228	1,064	16,056	3.9	586.9	586.9	587.4	0.5
C	53,930	1,602	20,434	3.1	587.4	587.4	587.9	0.5
D	57,007	1,137	19,367	3.2	588.2	588.2	588.8	0.6
E	58,190	1,021	17,237	3.6	588.5	588.5	589.0	0.5
F	59,960	1,555	20,355	3.1	588.6	588.6	589.3	0.7
G	61,538	2,058	23,120	2.4	588.6	588.6	589.4	0.8
H	66,154	4,895	41,163	3.4	589.5	589.5	590.2	0.7
I	69,424	2,175	25,383	2.0	590.1	590.1	590.8	0.7
J	72,450	3,610	40,766	3.4	590.9	590.9	591.6	0.7
K	73,069	4,000	55,342	0.9	591.7	591.7	592.3	0.6
L	75,070	4,041	50,120	1.5	591.8	591.8	592.5	0.7
M	77,147	4,720	65,636	0.8	591.9	591.9	592.7	0.8
N	81,934	6,481	63,094	0.8	591.9	591.9	592.8	0.9
O	85,162	6,550	50,258	1.0	591.9	591.9	592.8	0.9
P	88,408	10,000	86,363	0.6	592.0	592.0	593.0	1.0
Q	90,388	9,300	68,095	0.8	5921	5921	593.1	1.0
R	94,638	8,100	54,608	0.9	592.3	592.3	593.3	1.0
S	101,654	5,500	29,172	1.7	594.0	594.0	594.6	0.6
T	106,927	3,500	21,040	2.4	597.2	597.2	597.9	0.7
U	110,047	4,600	33,077	1.7	600.4	600.4	601.2	0.8
V	111,435	4,300	21,668	2.3	601.4	601.4	602.3	0.9

[1] Feet above mouth

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIRD CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek (cont.)								
W	112,604	3,500	24,924	2.0	602.3	602.3	603.2	0.9
X	114,881	2,864	30,067	3.5	604.5	604.5	605.2	0.7
Y	115,519	1,850	19,072	2.7	605.2	605.2	605.7	0.5
Z	117110	2,600	19,791	2.6	607.1	607.1	607.8	0.7
AA	119,173	3,227	44,174	1.2	607.4	607.4	608.2	0.8
AB	123,512	3,180	27,484	1.9	607.6	607.6	608.4	0.8
AC	126,259	5,796	37,199	1.4	608.1	608.1	609.1	1.0
AD	128,200	6,450	42,031	1.2	608.8	608.8	609.5	0.7
AE	130,810	4,020	30,638	1.7	609.4	609.4	610.1	0.7
AF	132,100	3,880	29,004	1.8	609.9	609.9	610.5	0.6
AG	133,220	4,911	34,254	1.5	610.3	610.3	610.9	0.6
AH	136,620	6,477	33,393	1.5	611.1	611.1	612.0	0.9
AI	138,475	6,512	25,719	2.0	611.4	611.4	612.4	1.0
AJ	141,725	6,200	27,101	1.9	612.3	612.3	613.3	1.0
AK	143,985	5,156	25,744	2.0	613.0	613.0	614.0	1.0
AL	152,115	4,864	35,201	1.4	615.3	615.3	616.0	0.7
AM	154,030	4,513	27,854	1.8	615.9	615.9	616.5	0.6
AN	157,160	6,100	36,097	1.4	616.9	616.9	617.4	0.5
AO	159,330	9,550	35,873	1.4	617.7	617.7	618.2	0.5
AP	162,780	9,590	51,985	1.0	619.0	619.0	619.2	0.2
AQ	165,300	6,049	34,782	1.5	619.4	619.4	619.7	0.3

[1] Feet above mouth

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIRD CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek (cont.)								
AR	168,170	4,354	24,417	2.1	619.8	619.8	620.2	0.4
AS	174,240	3,325	20,141	2.5	622.4	622.4	623.0	0.6
AT	177,690	3,936	26,310	1.9	625.0	625.0	625.9	0.9
AU	179,170	4,348	30,058	1.7	625.7	625.7	626.6	0.9
AV	180,520	4,612	33,433	1.5	626.1	626.1	627.0	0.9
AW	181,565	4,900	35,549	1.4	626.3	626.3	627.2	0.9
AX	182,860	4,949	31,041	1.6	626.5	626.5	627.4	0.9
AY	184,760	4,700	26,869	1.9	626.7	626.7	627.6	0.9
AZ	184,760	4,788	27,106	1.9	627.2	627.2	628.2	1.0
BA	186,040	4,880	22,682	2.2	627.4	627.4	628.4	1.0
BB	189,655	5,700	29,040	1.8	628.6	628.6	629.4	0.9
BC	193,830	3,990	21,649	2.4	629.8	629.8	630.4	0.6
BD	195,855	1,910	9,190	5.5	632.2	632.2	632.4	0.2
BE	197,590	2,057	13,750	3.7	634.9	634.9	635.1	0.2
BF	200,280	4,111	19,449	2.6	635.8	635.8	636.2	0.4
BG	204,160	4,700	23,989	2.1	637.1	637.1	637.4	0.3
BH	207,380	6,100	33,299	1.5	637.6	637.6	638.3	0.7
BI	208,570	4,800	25,102	2.0	637.7	637.7	638.6	0.9
BJ	209,935	4,700	18,673	2.7	638.2	638.2	639.0	0.8
BK	212,790	4,725	15,884	3.2	639.9	639.9	640.4	0.5
BL	214,230	5,400	15,354	3.3	640.7	640.7	641.3	0.6

[1] Feet above mouth

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIRD CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek (cont.)								
BM	216,565	5,580	19,269	2.6	642.2	642.2	642.9	0.7
BN	218,185	6,020	26,014	2.0	643.5	643.5	644.1	0.6
BO	222,900	6,477	31,535	1.6	644.9	644.9	645.3	0.4

[1] Feet above mouth

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek Tributary								
A	1,300	176	683	2.1	593.8	593.2[2]	594.2	1.0
B	2,900	150	323	4.4	601.0	601.0	601.8	0.8
C	4,150	175	702	2.0	603.9	603.9	604.8	0.9
D	5,230	111	370	3.8	606.9	606.9	607.3	0.4
E	6,050	100	384	3.7	610.1	610.1	610.9	0.8

[1]Feet above Mohawk Park Pond.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIRD CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bird Creek Tributary 5A								
A	3,450	83	411	6.0	590.2	581.8[2]	581.9	0.1
B	4,683	166	1,374	1.9	590.2	589.3[2]	589.3	0.0
C	6,802	79	732	3.6	590.2	589.6[2]	589.7	0.1
D	7,820	282	1,886	1.5	590.2	590.0[2]	590.5	0.5
E	8,621	102	738	4.3	590.2	590.2[2]	590.7	0.5
F	9,290	48	394	6.5	591.3	591.3	592.3	1.0
G	10,489	64	341	6.8	594.3	594.3	595.1	0.8
H	11,506	51	382	6.0	599.8	599.8	600.2	0.4
I	12,023	53	1,126	2.8	603.3	603.3	603.9	0.6
J	13,204	33	153	6.5	605.8	605.8	605.9	0.1
K	14,752	50	246	3.8	615.5	615.5	615.9	0.4
L	15,518	115	343	3.1	623.2	623.2	623.5	0.3
M	16,040	47	166	6.4	625.9	625.9	626.1	0.2
N	17,245	35	93	6.2	631.7	631.7	631.8	0.1
O	18,195	28	77	6.3	636.8	636.8	636.9	0.1
P	19,456	47	112	4.0	646.7	646.7	647.1	0.4
Q	20,514	53	91	4.7	653.1	653.1	653.9	0.8

[1]Feet above confluence with Bird Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

BIRD CREEK TRIBUTARY 5A

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Bixby Creek								
A	1,097	115	832	4.4	597.5	585.7[2]	596.0	0.3
B	2,094	116	755	4.0	597.5	596.1[2]	596.5	0.4
C	4,138	193	852	3.6	597.5	597.1[2]	597.7	0.6
D	4,799	320	1,512	2.0	597.5	597.4[2]	598.1	0.4
E	5,291	358	1,454	2.0	597.7	597.7	598.4	0.4
F	5,596	374	1,732	1.7	597.8	597.8	598.5	0.4
G	7,173	135	803	3.5	598.0	598.0	598.7	0.4
H	7,717	114	738	3.8	598.0	598.0	599.0	1.0
I	9,158	340	1,748	1.4	598.6	598.6	599.6	1.0
J	10,695	201	1,019	1.1	598.9	598.9	599.7	0.8
K	11,075	109	610	1.8	599.5	599.5	599.8	0.3
L	13,256	625	2,833	0.4	599.8	599.8	600.1	0.3
M	14,536	76	272	4.0	600.8	600.8	601.5	0.7
N	15,472	196	749	1.4	601.3	601.3	602.1	0.8
O-R[3]								

[1] Feet above confluence with Arkansas River

[2] Elevation computed without consideration of backwater effects from Arkansas River

[3] No floodway computed

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BIXBY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Blackjack Creek								
A	640	1,090	4,741	1.8	592.9	592.9	593.9	1.0
B	1,460	980	3,873	2.2	593.6	593.6	594.6	1.0
C	3,215	1,090	6,155	1.4	595.0	595.0	595.9	0.9
D	5,080	1,360	7,406	1.2	595.7	595.7	596.6	0.9
E	6,250	1,310	7,339	1.2	596.1	596.1	597.0	0.9
F	7,470	845	3,608	2.4	597.0	597.0	597.9	0.9
G	8,535	760	3,748	2.3	598.2	598.2	599.1	0.9
H	9,430	800	3,554	2.4	599.0	599.0	599.9	0.9
I	10,510	840	4,233	2.0	599.9	599.9	600.8	0.9
J	11,550	830	3,205	2.7	600.6	600.6	601.5	0.9
K	13,430	805	4,151	2.1	601.8	601.8	602.7	0.9
L	14,775	795	1,716	5.0	603.6	603.6	604.5	0.9
M	15,765	850	3,150	2.8	607.4	607.4	608.4	1.0
N	16,780	640	2,509	3.4	610.5	610.5	611.3	0.8
O	17,540	455	2,556	3.4	612.9	612.9	613.5	0.6
P	18,130	484	3,208	2.7	613.5	613.5	614.2	0.7
Q	19,760	750	2,791	2.6	615.8	615.8	616.0	0.2
R	21,380	635	2,527	2.9	618.2	618.2	618.7	0.5
S	23,070	395	2,073	3.6	620.4	620.4	621.1	0.7
T	24,140	579	2,201	3.4	621.6	621.6	622.3	0.7
U	25,350	425	1,586	4.7	623.0	623.0	624.0	1.0

[1] Feet above confluence with Horsepen Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BLACKJACK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Blackjack Creek (cont.)								
V	26,830	920	3,381	2.2	625.5	625.5	626.2	0.7
W	28,980	490	1,947	3.8	628.4	628.4	629.3	0.9
X	30,385	445	2,064	3.6	631.0	631.0	631.8	0.8
Y	32,340	475	6,305	3.2	633.1	633.1	634.0	0.9
Z	33,610	820	2,641	2.8	634.6	634.6	635.2	0.6
AA	34,840	310	1,482	5.0	636.9	636.9	636.9	0.0
AB	35,570	500	2,498	1.6	637.8	637.8	638.4	0.6
AC	36,650	450	1,676	2.4	638.4	638.4	639.1	0.7
AD	38,010	300	1,201	3.4	640.5	640.5	641.0	0.5
AE	38,600	270	1,108	3.7	641.8	641.8	642.3	0.5
AF	39,930	79	443	7.7	643.3	643.3	644.3	1.0
AG	41,545	320	1,307	2.6	648.8	648.8	649.6	0.8
AH	44,410	80	390	5.8	655.8	655.8	656.3	0.5
AI	45,640	90	458	3.7	633.0	633.0	663.6	0.6
AJ	46,680	60	299	5.7	677.4	677.4	668.2	0.8
AK	47,320	80	389	4.4	670.8	670.8	671.4	0.6
AL	48,320	102	395	4.3	674.4	674.4	675.1	0.7
AM	48,840	57	218	6.3	677.2	677.2	678.1	0.9

[1] Feet above confluence with Horsepen Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BLACKJACK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Blackjack Creek Tributary A								
A	1,880	292	1,074	2.8	617.8	617.8	617.8	0.0
B	2,548	160	700	4.4	619.6	619.6	620.0	0.4
C	3,328	116	612	5.0	623.1	623.1	623.1	0.0
D	3,946	100	477	6.6	626.2	626.2	626.4	0.2
E	4,840	159	1,183	2.7	633.1	633.1	633.2	0.1
F	5,267	146	688	4.6	633.8	633.8	634.3	0.5
G	5,890	96	639	4.9	635.7	635.7	636.2	0.5
H	6,725	144	601	4.8	641.1	641.1	642.0	0.9
I	7,003	116	661	4.4	642.8	642.8	643.1	0.3
J	7,752	104	454	6.3	644.7	644.7	645.1	0.4

[1]Stream distance in feet above confluence with Blackjack Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BLACKJACK CREEK TRIBUTARY A

FLOODING SOURCE		FLOODWAY			BASE 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
Broken Arrow Creek								
A	309	269	2,263	5.6	586.4	585.3[3]	585.9	0.6
B	1,274	101	1,458	8.7	588.1	588.1	588.7	0.6
C	1,654	72	1,055	12.0	588.2	588.2	589.0	0.8
D	2,618	125	1,620	7.8	591.9	591.9	592.6	0.7
E	3,816	385	4,394	2.9	593.7	593.7	594.4	0.7
F	5,080	119	1,710	7.3	594.0	594.0	595.0	1.0
G	6,367	105	1,470	8.5	596.0	596.0	597.0	1.0
H	7,555	118	1,571	8.0	597.8	597.8	598.5	0.7
I	8,400	168	1,696	7.4	600.2	600.2	600.6	0.4
J	8,810	115	1,634	7.7	602.0	602.0	602.3	0.3
K	10,554	400	3,092	4.1	603.2	603.2	604.1	0.9
L	13,916	280	1,935	4.8	607.1	607.1	607.8	0.7
M	14,574	533	3,200	2.9	608.1	608.1	609.0	0.9
N	15,364	618	3,819	2.4	608.7	608.7	609.6	0.9
O	16,260	341	2,503	3.7	609.3	609.3	610.1	0.8
P	16,353	341	2,042	4.7	609.4	609.4	610.1	0.7
Q	17,052	309	2,571	3.6	610.8	610.8	611.4	0.6
R	17,341	447	2,812	3.3	611.2	611.2	611.9	0.7
S	17,435	447	3,384	3.7	612.8	612.8	613.6	0.8
T	18,727	627	3,654	2.5	614.5	614.5	615.3	0.8
U	21,255	633	4,512	2.0	616.5	616.5	617.3	0.8
V-AP[2]								

[1] Feet above confluence with Arkansas River

[2] Cross sections located outside County boundary

[3] Water-surface elevations computed without consideration of backwater effects

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BROKEN ARROW CREEK

FLOODING SOURCE		FLOODWAY			BASE 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
Broken Arrow Creek								
AQ	45,489	199	1,022	3.8	670.0	670.0	671.0	1.0
AR	46,374	437	1,524	2.5	673.2	673.2	674.0	0.8
AS	46,759	175	896	4.3	673.5	673.5	674.1	0.6
AT	47,652	201	1,134	3.0	675.9	675.9	676.5	0.6
AU	47,869	139	773	4.3	676.1	676.1	676.7	0.6
AV	48,056	72	424	7.9	676.3	676.3	676.8	0.5
AW	48,445	157	948	3.5	678.7	678.7	679.5	0.8
AX	49,188	40	271	6.6	683.2	683.2	683.3	0.1
AY	49,994	140	391	4.6	686.6	686.6	686.8	0.2
AZ	50,952	152	509	3.5	689.9	689.9	690.5	0.6
BA	51,146	69	329	5.4	690.2	690.2	690.9	0.7
BB	52,082	156	582	3.1	693.8	693.8	694.2	0.4
BC	52,887	85	241	7.4	695.9	695.9	695.9	0.0
BD	53,654	120	542	3.3	699.1	699.1	700.0	0.9
BE	54,029	158	465	4.3	700.4	700.4	701.0	0.6
BF	54,347	116	453	4.6	702.2	702.2	702.6	0.4
BG	54,676	153	529	2.0	703.0	703.0	703.7	0.7

[1] Feet above confluence with Arkansas River

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BROKEN ARROW CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET NAVD 88)
Brookhollow Creek								
A	1,172	79	577	5.0	640.4	639.4[2]	639.5	0.1
B	2,318	72	403	7.1	642.3	642.3	642.3	0.0
C	3,272	54	435	6.6	644.9	644.9	645.0	0.1
D	5,338	94	831	6.9	652.8	652.8	653.6	0.8
E	5,480	70	505	7.0	652.8	652.8	653.6	0.8
F	6,010	62	377	9.2	654.0	654.0	654.6	0.6
G	6,850	74	415	7.4	659.1	659.1	659.1	0.0
H	7,778	76	373	7.9	662.9	662.9	662.9	0.0
I	8,637	74	319	8.8	666.7	666.7	666.7	0.0
J	9,862	70	444	8.4	680.8	680.8	680.8	0.0
K	10,589	111	456	7.9	684.9	684.9	685.3	0.4
L	11,720	175	913	3.7	691.1	691.1	691.9	0.8
M	13,537	95	404	8.0	696.1	696.1	696.6	0.5
N	14,163	129	539	5.9	700.9	700.9	700.9	0.0
O	14,886	110	684	4.6	706.3	706.3	706.3	0.0
P	15,475	87	764	4.0	709.7	709.7	709.7	0.0
Q	16,296	89	577	3.5	709.9	709.9	710.0	0.1
R	16,840	82	492	4.8	711.0	711.0	711.2	0.2
S	17,364	67	422	5.5	713.3	713.3	713.4	0.1
T	17,821	63	412	5.2	716.8	716.8	716.8	0.0
U	19,072	254	833	2.6	725.5	725.5	726.2	0.7
V	20,011	420	1,211	2.1	730.1	730.1	730.7	0.6

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

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BROOKHOLLOW CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET NAVD 88)
Brookhollow Creek Tributary								
A	642	84	686	3.7	654.6	654.6	655.2	0.6
B	1,437	89	338	7.1	656.1	656.1	656.1	0.0
C	1,943	89	377	6.1	657.8	657.8	657.8	0.0
D	2,354	46	248	9.1	658.5	658.5	658.5	0.0
E	2,515	111	577	3.9	661.3	661.3	661.3	0.0
F	3,020	67	292	7.6	662.5	662.5	662.5	0.0
G	3,366	55	268	8.3	664.0	664.0	664.0	0.0
H	3,715	55	312	7.1	666.1	666.1	666.1	0.0
I	4,244	52	326	6.6	669.8	669.8	669.8	0.0
J	4,890	67	423	5.1	674.7	674.7	675.1	0.4
K	5,400	85	390	5.5	678.5	678.5	678.5	0.0
L	5,488	80	512	4.2	679.1	679.1	680.0	0.9
M	6,013	65	210	10.0	680.9	680.9	681.3	0.4
N	6,766	67	355	5.9	691.0	691.0	691.1	0.1
O	7,403	105	609	3.3	694.7	694.7	695.4	0.7
P	7,788	38	156	5.6	698.7	698.7	698.8	0.1
Q	8,615	100	543	1.2	705.0	705.0	705.9	0.9
R	9,156	62	132	4.9	708.2	708.2	708.4	0.2

[1] Feet above confluence with Brookhollow Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

BROOKHOLLOW CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Caney River								
A - D[2]								
E	17,875	3,668	31,951	1.1	599.5	599.5	600.4	0.9
F	20,300	4,653	32,064	1.1	600.3	600.3	601.3	1.0
G	25,950	5,641	40,080	0.9	600.7	600.7	601.7	1.0
H	32,380	5,826	34,342	1.0	601.2	601.2	602.2	1.0
I	35,200	5,996	38,891	0.9	601.6	601.6	602.6	1.0
J	36,850	7,553[3]	43,288	0.8	601.8	601.8	602.8	1.0

[1]Feet above downstream Limit of Detailed Study.
[2]Cross section located outside of Tulsa County.
[3]Total floodway width.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

CANEY RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Catfish Creek								
A	350	56	233	5.5	667.9	661.6[2]	661.7[2]	0.1
B	735	55	169	7.6	667.9	663.3[2]	663.3[2]	0.0
C	1,103	33	180	6.0	667.9	667.9	667.9	0.0
D	2,425	60	228	4.7	668.4	668.4	668.7	0.3
E	2,825	185	489	2.2	670.2	670.2	670.3	0.1
F	4,148	1,112	8,174	0.2	678.7	678.7	678.8	0.1
G	4,865	753	4,041	0.4	678.7	678.7	678.8	0.1

[1]Feet above confluence with Mingo Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

CATFISH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Charley Creek								
A	6,874	1,100	6,898	1.1	616.8	616.8	617.8	1.0
B	7,743	600	4,501	1.7	617.2	617.2	618.1	0.9
C	9,487	700	4,687	1.6	617.8	617.8	618.8	1.0
D	11,430	400	2,620	2.9	619.3	619.3	620.1	0.8
E	13,060	800	4,482	1.7	620.8	620.8	621.7	0.9
F	17,043	650	4,141	1.0	625.4	625.4	626.4	1.0
G	19,386	170	1,063	3.7	626.8	626.8	627.4	0.6
H	21,537	439	1,841	2.1	630.0	630.0	631.0	1.0
I	23,507	220	1,784	2.4	637.7	637.7	637.9	0.2
J	25,259	800	3,400	1.3	638.3	638.3	639.2	0.9

[1]Feet above confluence with Bird Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

CHARLEY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cherry Creek (North Tulsa)								
A	720	161	900	6.3	609.5	609.5	610.0	0.5
B	1,390	230	1,757	3.2	611.6	611.6	612.5	0.9
C	2,210	195	1,594	3.6	613.0	613.0	613.8	0.8
D	2,780	200	1,609	3.5	613.9	613.9	614.4	0.5
E	3,435	120	922	6.2	614.4	614.4	615.6	1.2
F	4,030	260	1,433	4.0	615.9	615.9	616.7	0.8
G	4,435	145	696	8.2	618.3	618.3	618.3	0.0
H	4,895	140	791	7.2	620.5	620.5	621.0	0.5
I	5,810	190	954	5.9	624.7	624.7	625.1	0.4
J	6,625	390	2,008	2.8	626.7	626.7	627.3	0.6
K	7,660	280	1,308	4.3	627.8	627.8	628.7	0.9
L	8,050	562	2,565	2.2	628.7	628.7	629.5	0.8
M	9,840	290	1,307	4.3	631.4	631.4	631.7	0.3
N	10,300	200	1,120	5.1	632.3	632.3	632.9	0.6
O	11,215	300	1,542	3.7	633.6	633.6	634.3	0.7
P	12,525	225	1,141	5.0	635.6	635.6	636.5	0.9
Q	13,980	275	1,522	3.7	639.4	639.4	640.1	0.7
R	15,010	160	821	5.5	641.2	641.2	642.0	0.8
S	16,470	280	1,168	3.8	645.3	645.3	646.3	1.0
T	17,260	290	1,723	2.6	648.3	648.3	649.0	0.7

[1]Feet above confluence with Horsepen Creek.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cherry Creek (North Tulsa) (cont)								
U	18,010	170	787	5.7	650.2	650.2	650.9	0.7
V	19,040	260	1,340	3.4	652.8	652.8	653.2	0.4
W	20,530	310	1,452	3.1	653.8	653.8	654.3	0.5
X	22,030	730	2,072	2.2	655.1	655.1	655.4	0.3
Y	23,310	365	1,338	3.4	657.1	657.1	657.1	0.0
Z	24,570	350	1,744	1.8	659.3	659.3	660.1	0.8
AA	25,365	380	1,825	1.7	660.2	660.2	660.9	0.7
AB	26,460	170	921	2.5	662.6	662.6	663.1	0.5
AC	27,445	135	841	2.8	663.3	663.3	664.1	0.8
AD	28,145	150	662	3.5	664.2	664.2	665.1	0.9
AE	29,590	219	1,009	3.0	667.5	667.5	668.4	0.9
AF	30,720	150	843	1.2	671.7	671.7	672.4	0.7
AG	31,500	125	442	2.2	672.4	672.4	672.9	0.5
AH	33,100	105	379	2.6	676.7	676.7	677.6	0.9
AI	34,350	80	256	3.8	680.6	680.6	681.2	0.6

[1]Feet above confluence with Horsepen Creek.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cherry Creek Tributary								
A	260	100	433	2.1	659.6	659.6	660.5	0.9
B	1,030	80	296	3.0	661.6	661.6	662.4	0.8
C	1,750	65	251	3.5	663.4	663.4	664.1	0.7
D	2,870	181	181	4.9	670.7	670.7	670.7	0.0
E	4,000	86	74	2.9	671.1	671.1	671.6	0.5
F	5,150	60	66	1.8	678.3	678.3	679.1	0.8
G	6,430	40	26	4.6	686.6	686.6	686.7	0.1

[1] Feet above confluence with Cherry Creek (North Tulsa).

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cherry Creek (West Tulsa)								
A	1,700	91	760	8.7	626.1	624.9[2]	624.9	0.0
B	3,850	111	974	6.4	627.6	627.6	627.6	0.0
C	6,100	95	681	8.5	630.2	630.2	630.2	0.0
D	6,950	84	428	3.7	631.7	631.7	631.8	0.1
E	8,500	80	382	4.7	633.4	633.4	633.4	0.0

[1] Feet above confluence with Arkansas River.
[2] Water-surface elevations computed without consideration of backwater effects from Arkansas River.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY
TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK (WEST TULSA)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek (North Tulsa)								
A	2,860	1,500	3,400	2.1	594.0	593.4[2]	594.4	1.0
B	4,085	1,504	4,055	1.8	594.0	594.0[2]	594.9	0.9
C	7,075	1,000	3,296	2.2	595.5	595.5	596.2	0.7
D	8,975	600	1,735	4.0	598.0	598.0	598.9	0.9
E	9,472	200	1,010	6.9	600.1	600.1	600.4	0.3
F	9,717	200	2,046	3.4	603.1	603.1	603.8	0.7
G	10,352	200	1,528	4.6	603.8	603.8	604.7	0.9
H	11,072	210	1,337	5.2	605.6	605.6	606.1	0.5
I	12,122	275	2,100	3.2	607.6	607.6	608.2	0.6
J	12,697	300	1,831	3.7	608.4	608.4	609.4	1.0
K	13,307	200	1,152	5.8	610.9	610.9	611.5	0.6
L	14,117	150	1,098	6.1	613.9	613.9	614.3	0.4
M	14,952	125	1,343	5.0	616.5	616.5	616.9	0.4
N	15,777	168	1,178	5.7	618.5	618.5	618.9	0.4
O	16,679	212	2,070	3.3	621.8	621.8	622.3	0.5
P	17,319	295	1,738	3.9	622.5	622.5	623.0	0.5
Q	19,224	150	1,125	5.5	626.6	626.6	627.4	0.8
R	20,124	315	1,965	3.1	629.3	629.3	630.1	0.8
S	20,804	90	667	7.5	630.0	630.0	630.7	0.7

[1]Feet above confluence with Mohawk Park Pond.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK (NORTH TULSA)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek (North Tulsa) (cont)								
T	21,454	150	637	7.8	635.0	635.0	635.7	0.7
U	22,104	83	643	7.8	638.5	638.5	639.0	0.5
V	23,197	173	1,097	4.6	643.5	643.5	644.3	0.8
W	24,251	105	711	7.0	650.3	650.3	650.4	0.1
X	24,409	100	918	5.4	652.8	652.8	652.8	0.0
Y Z	25,884	105	1,009	5.0	656.0	656.0	656.4	0.4
AA	26,167	79	719	7.0	656.9	656.9	657.5	0.6
AB	27,417	104	937	5.3	661.4	661.4	661.9	0.5
AC	27,601	50	544	9.2	662.2	662.2	662.7	0.5
AD	28,781	92	517	9.6	664.1	664.1	664.3	0.2
AE	30,156	57	228	11.5	671.4	671.4	671.4	0.0
	31,846	23	120	13.0	684.7	684.7	684.7	0.0

[1]Feet above confluence with Mohawk Park Pond.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK (NORTH TULSA)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek Tributary								
A	640	52	287	8.5	665.8	665.8	666.8	1.0
B	1,080	46	304	8.0	670.3	670.3	670.4	0.1
C	1,375	95	462	2.9	673.8	673.8	674.3	0.5
D	1,825	58	307	4.4	676.4	676.4	676.4	0.0
E	2,475	31	184	7.3	680.8	680.8	681.2	0.4

[1]Feet above confluence with Coal Creek (North Tulsa).

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek Tributary A								
A	746	220	1043	1.3	644.9	644.9	645.9	1.0
B	2,421	165	216	6.0	650.4	650.4	650.4	0.0
C	3,270	116	348	3.7	657.5	657.5	657.8	0.3
D	4,628	173	213	6.1	670.5	670.5	670.5	0.0

[1]Feet above confluence with Coal Creek (West Tulsa).

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK TRIBUTARY A

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek Tributary B								
A	221	178	921	2.4	648.0	648.0	649.0	1.0
B	1,618	340	458	4.8	655.7	655.7	655.7	0.0
C	5,014	180	646	3.4	672.3	672.3	673.3	1.0
D	6,292	46	244	8.9	678.2	678.2	679.1	0.9
E	6,460	153	557	3.9	680.6	680.6	681.2	0.6
F	6,545	160	1241	1.8	684.7	684.7	685.6	0.9
G	7,510	85	613	3.6	684.9	684.9	685.9	1.0
H	8,730	80	296	7.4	687.2	687.2	688.1	0.9
I	9,880	94	364	6.0	697.5	697.5	698.2	0.7

[1]Feet above confluence with Coal Creek (West Tulsa).

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK TRIBUTARY B

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Coal Creek (West Tulsa)								
A	100	235	1,664	5.5	652.6	621.1	621.1	0.0
B	1,440	354	3,178	2.9	626.1	623.2	623.4	0.2
C	3,395	329	3,605	2.6	627.5	625.3	625.9	0.6
D	4,478	246	2,316	4.0	628.3	626.6	627.2	0.6
E	5,758	230	2,115	4.3	628.5	627.9	628.7	0.8
F	8,598	138	1,201	7.4	633.5	633.5	634.3	0.8
G	12,198	677	3,993	2.2	641.2	641.2	641.9	0.7
H	15,718	1,089	4,925	1.7	644.4	644.4	645.0	0.6
I	17,398	574	2,028	4.0	646.6	646.6	647.6	1.0
J	20,338	846	1,767	3.4	652.6	652.6	653.4	0.8
K	22,216	87	718	8.4	661.7	661.7	662.0	0.3
L	23,800	279	1,461	4.0	667.7	667.7	668.0	0.3
M	29,530	200	798	6.5	681.4	681.4	682.0	0.6
N	31,866	401	1,815	2.1	690.0	690.0	690.4	0.4
O	34,436	201	1,059	3.1	695.8	695.8	696.1	0.3
P	36,956	172	752	4.4	701.6	701.6	702.3	0.7
Q	39,006	281	1,301	1.6	704.9	704.9	705.7	0.8
R	39,088	333	1,668	1.3	704.8	705.1	705.9	0.8
S	41,408	141	613	3.4	706.5	706.5	707.2	0.7
T	43,408	184	752	2.8	711.0	711.6	712.2	0.6

[1]Feet above confluence with Polecat Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK (WEST TULSA)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cooley Creek								
A	800	76	370	12.7	614.9	605.1[2]	605.1	0.0
B	1,500	102	676	6.9	617.9	617.9	618.9	1.0
C	2,450	371	1,026	2.3	626.6	626.6	626.6	0.0
D	3,400	960	1,979	2.4	626.9	626.9	627.1	0.2
E	4,600	83	384	12.3	629.6	629.6	629.6	0.0
F	5,300	40	299	15.6	634.0	634.0	634.0	0.0
G	5,700	40	318	14.7	636.8	636.8	636.8	0.0
H	6,200	40	299	15.6	638.0	638.0	638.0	0.0
I	7,400	529	3,306	1.7	647.9	647.9	647.9	0.0
J	9,875	80	357	6.5	656.3	656.3	656.6	0.3
K	12,093	100	460	5.2	666.8	666.8	667.4	0.6
L	12,647	43	195	12.2	668.4	668.4	668.4	0.0
M	12,797	209	1,107	2.1	674.0	674.0	674.0	0.0
N	14,458	147	402	9.0	677.6	677.6	678.2	0.6
O	14,958	118	589	6.1	682.0	682.0	682.9	0.9
P	15,958	103	444	7.7	686.0	686.0	686.9	0.9
Q	17,648	100	249	7.7	695.2	695.2	695.3	0.1

[1]Feet above confluence with Mingo Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

COOLEY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cooley Creek Tributary								
A	635	110	479	8.9	657.0	657.0	658.0	1.0
B	1,120	112	679	5.6	661.7	661.7	662.6	0.9
C	2,000	200	1,066	4.0	668.4	668.4	669.1	0.7
D	2,810	85	500	7.5	673.5	673.5	673.5	0.0
E	3,600	350	2,350	2.2	678.5	678.5	678.5	0.0
F	3,860	311	1,903	3.0	678.6	678.6	678.6	0.0
G	4,510	212	967	4.1	679.0	679.0	679.2	0.2
H	5,170	150	650	5.3	681.8	681.8	682.6	0.8
I	5,590	167	710	4.6	685.4	685.4	686.4	1.0
J	6,780	133	610	3.8	691.1	691.1	692.0	0.9
K	7,430	230	848	3.0	694.9	694.9	695.9	1.0
L	8,380	217	846	3.3	698.9	698.9	699.8	0.9
M	9,520	94	519	4.1	704.3	704.3	705.2	0.9
N	10,000	246	1,081	2.5	709.2	709.2	710.2	1.0
O	10,660	124	333	9.2	711.9	711.9	712.7	0.8
P	11,050	82	305	8.8	713.1	713.1	713.4	0.3
Q	11,790	86	332	9.0	716.9	716.9	717.0	0.1
R	12,220	78	325	9.3	718.2	718.2	718.8	0.6
S	12,870	73	302	10.1	720.8	720.8	721.3	0.5

[1] Feet above confluence with Cooley Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COOLEY CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cooley Creek Tributary (cont.)								
T	13,890	100	377	7.9	725.2	725.2	726.0	0.8
U	14,425	70	264	8.1	726.9	726.9	727.5	0.6
V	14,590	70	286	7.6	728.3	728.3	729.0	0.7
W	15,400	56	247	8.3	731.1	731.1	731.6	0.5
X	16,770	72	358	6.9	737.4	737.4	737.8	0.4
Y	18,220	60	317	7.7	743.6	743.6	744.5	0.9
Z	19,610	65	487	3.5	759.7	759.7	759.8	0.1

[1] Feet above confluence with Cooley Creek

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

COOLEY CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Crow Creek								
A	100	68	602	7.5	629.0	629.0	629.0	0.0
B	1,800	58	483	9.3	636.8	636.8	636.8	0.0
C	3,300	78	715	6.3	646.8	646.8	646.8	0.0
D	4,550	130	1,062	4.3	651.4	651.7	652.1	0.4
E	5,350	139	709	6.4	655.4	655.7	656.2	0.5
F	6,770	147	1,202	3.6	664.7	664.7	665.5	0.8
G	8,300	317	1,434	3.0	670.6	670.3	670.3	0.0
H	9,750	238	1,740	2.5	679.8	680.1	680.6	0.5

[1]Feet above confluence with Arkansas River.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

CROW CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Delaware Creek								
A	260	2,847	11,184	1.5	603.9	603.9	604.9	1.0
B	2,500	2,900	12,754	1.3	604.5	604.5	605.4	0.9
C	4,660	2,636	13,548	1.3	604.7	604.7	605.6	0.9
D	6,620	2,650	15,299	1.1	604.9	604.9	605.8	0.9
E	9,180	1,692	11,035	1.6	605.2	605.2	606.1	0.9
F	11,645	2,240	10,985	1.6	605.7	605.7	606.5	0.8
G	13,002	1,801	7,715	2.2	606.3	606.3	607.1	0.8
H	13,635	2,028	9,516	1.8	606.6	606.6	607.4	0.8
I	14,420	2,409	11,390	1.5	606.8	606.8	607.6	0.8
J	14,985	2,227	9,125	1.9	606.8	606.8	607.7	0.9
K	15,760	4,160	17,311	1.0	607.1	607.1	608.0	0.9
L	16,535	4,494	16,306	1.1	607.2	607.2	608.0	0.8
M	18,055	3,641	13,873	1.2	607.7	607.7	608.5	0.8
N	19,040	3,980	12,781	1.3	608.0	608.0	608.8	0.8
O	20,350	5,200	19,995	0.9	609.2	609.2	609.7	0.5
P	21,160	4,171	12,749	1.3	609.4	609.4	609.9	0.5
Q	21,970	4,026	12,178	1.4	609.8	609.8	610.2	0.4
R	22,625	4,200	13,251	1.3	610.8	610.8	611.0	0.2
S	23,820	3,800	16,867	1.0	614.0	614.0	614.2	0.2
T	24,775	4,007	15,161	1.1	614.1	614.1	614.4	0.3

[1]Feet above confluence with Bird Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DELAWARE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Delaware Creek (cont)								
U	25,965	4,313	14,349	1.2	614.3	614.3	614.6	0.3
V	26,465	4,276	13,343	1.3	614.5	614.5	614.8	0.3
W	27,510	4,358	14,306	1.2	614.8	614.8	615.1	0.3
X	29,715	3,373	14,421	1.2	616.8	616.8	617.6	0.8
Y	30,770	2,805	11,054	1.6	617.3	617.3	618.0	0.7
Z	31,525	2,800	9,471	1.8	617.7	617.7	618.3	0.6
AA	32,450	2,300	9,824	1.7	618.3	618.3	618.9	0.6
AB	33,270	1,675	6,223	2.8	619.1	619.1	619.7	0.6

[1]Feet above confluence with Bird Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DELAWARE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Delaware Creek Tributary								
A	405	90	656	2.3	608.6	597.1	598.1	1.0
B	2,610	89	543	2.8	608.6	600.3	600.5	0.2
C	4,205	71	340	4.4	603.6	603.6	604.2	0.6
D	6,378	105	609	2.5	609.7	609.7	610.7	1.0
E	6,518	115	688	1.3	609.8	609.8	610.8	1.0
F	8,136	213	827	1.1	616.8	616.8	617.8	1.0

[1]Feet above confluence with Delaware Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DELAWARE CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Dirty Butter Creek								
A	3,625	412	3,352	2.7	615.0	615.0	616.0	1.0
B	5,895	496	3,042	3.0	617.6	617.6	618.5	0.9
C	7,612	511	3,334	2.6	621.7	621.7	622.5	0.8
D	8,612	320	1,922	4.6	622.6	622.6	623.5	0.9
E	10,043	193	1,685	5.2	625.1	625.1	625.9	0.8
F	11,004	120	715	7.7	625.5	625.5	626.4	0.9
G	11,832	138	946	5.8	629.2	629.2	629.2	0.0
H	12,432	100	569	9.7	629.2	629.2	629.2	0.0
I	13,123	120	788	5.7	633.1	633.6	633.6	0.0
J	14,787	119	856	5.2	642.3	642.3	643.0	0.7
K	16,053	136	1,245	3.2	646.9	646.9	647.9	1.0
L	16,697	180	1,161	2.2	647.2	647.2	648.0	0.8
M	18,021	78	682	3.7	650.3	650.3	651.1	0.8
N	18,346	78	686	3.6	650.4	650.4	651.2	0.8

[1]Feet above confluence with Flat Rock Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DIRTY BUTTER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Dirty Butter Creek Tributary								
A	775	94	565	6.5	629.7	629.7	630.7	1.0
B	1,409	50	834	4.4	641.8	641.8	641.8	0.0
C	2,684	86	879	4.5	641.9	641.9	642.5	0.6
D	3,684	71	638	6.1	645.2	645.2	645.4	0.2
E	4,229	94	612	6.4	646.6	646.6	647.1	0.5
F	5,254	160	588	6.7	650.7	650.7	651.2	0.5

[1]Feet above confluence with Dirty Butter Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DIRTY BUTTER CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Douglas Creek								
A	1,195	784	3,208	1.70	610.3	606.5[2]	606.6	0.1
B	1,829	796	2,965	1.90	610.3	607.5[2]	607.6	0.1
C	2,888	510	3,280	1.20	611.7	618.8	619.3	0.5
D	3,961	400	1,500	2.70	617.9	619.2	620.0	0.8
E	5,734	220	1,260	3.20	619.4	621.5	622.5	1.0
F	7,447	120	920	4.40	621.9	624.3	625.3	1.0

[1] Feet above confluence with Mingo Creek.
[2] Water-surface elevations computed without consideration of backwater effects

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DOUGLAS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek								
A	50	1,430	9,031	3.7	606.4	606.4	607.4	1.0
B	650	1,306	8,778	3.8	607.6	607.6	608.3	0.7
C	1,300	1,641	11,132	3.0	608.5	608.5	609.4	0.9
D	2,000	1,975	13,560	2.5	609.4	609.4	610.2	0.8
E	2,700	2,309	17,259	1.9	609.9	609.9	610.8	0.9
F	3,400	2,493	18,263	1.9	610.4	610.4	611.2	0.8
G	4,100	2,533	18,985	1.8	610.6	610.6	611.4	0.8
H	4,800	3,111	22,237	1.5	611.0	611.0	611.7	0.7
I	5,500	4,168	24,841	1.4	611.3	611.3	612.0	0.7
J	6,850	4,204	24,571	1.4	613.0	613.0	613.4	0.4
K	7,550	3,668	21,547	1.6	613.2	613.2	613.7	0.5
L	8,250	3,215	19,070	1.8	613.5	613.5	614.0	0.5
M	8,950	3,173	19,980	1.7	613.8	613.8	614.3	0.5
N	9,500	2,447	14,011	2.4	613.9	613.9	614.4	0.5
O	10,200	2,102	13,987	2.4	614.5	614.5	615.0	0.5
P	11,000	1,869	11,526	2.9	614.9	614.9	615.4	0.5
Q	11,700	1,631	9,385	3.6	615.4	615.4	615.9	0.5
R	12,750	1,378	10,422	3.2	617.4	617.4	618.2	0.8
S	14,200	2,258	16,843	2.0	619.3	619.3	620.1	0.8
T	14,950	3,046	23,605	1.4	619.7	619.7	620.4	0.7

[1]Feet above confluence with Snake Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DUCK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek (cont)								
U	15,700	2,525	18,007	1.9	619.9	619.9	620.6	0.7
V	16,450	2,654	19,378	1.7	620.1	620.1	620.8	0.7
W	17,200	2,326	16,575	1.9	620.3	620.3	621.0	0.7
X	17,950	1,975	13,836	2.3	620.7	620.7	621.3	0.6
Y	18,700	1,659	14,041	2.2	621.0	621.0	621.7	0.7
Z	19,450	1,661	12,857	2.4	621.3	621.3	621.9	0.6
AA	20,200	1,522	12,702	2.5	621.6	621.6	622.2	0.6
AB	20,950	1,567	10,534	3.0	621.9	621.9	622.5	0.6
AC	48,800	1,815	8,202	2.2	639.3	639.3	640.1	0.8
AD	49,350	2,291	10,952	1.7	639.7	639.7	640.5	0.8
AE	50,100	1,975	7,998	2.3	640.1	640.1	640.8	0.7
AF	50,750	1,825	7,879	2.3	640.7	640.7	641.3	0.6
AG	51,500	1,555	7,866	2.3	641.1	641.1	641.7	0.6
AH	52,350	1,078	6,088	3.0	641.5	641.5	642.1	0.6
AI	53,100	464	2,950	6.2	641.9	641.9	642.5	0.6
AJ	53,750	705	7,898	2.3	643.1	643.1	643.9	0.8
AK	54,400	890	7,362	2.5	643.2	643.2	644.0	0.8
AL	54,900	721	4,237	4.3	643.3	643.3	644.1	0.8
AM	55,700	1,309	6,349	2.9	644.4	644.4	645.3	0.9
AN	56,350	1,520	7,471	2.4	644.8	644.8	645.7	0.9

[1]Feet above confluence with Snake Creek.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek (cont)								
AO	57,000	1,918	9,360	1.9	645.3	645.3	646.1	0.8
AP	58,850	1,730	7,809	2.3	646.4	646.4	647.1	0.7
AQ	59,600	2,359	9,311	1.9	646.9	646.9	647.6	0.7
AR	60,335	2,583	10,218	1.8	647.5	647.5	648.0	0.5
AS	61,000	2,190	8,427	2.2	648.0	648.0	648.4	0.4
AT	61,700	1,973	9,513	1.9	648.6	648.6	648.9	0.3
AU	62,195	2,157	7,678	2.4	648.8	648.8	649.2	0.4
AV	63,000	2,013	6,694	2.7	649.6	649.6	650.0	0.4
AW	63,650	2,198	7,045	2.6	650.3	650.3	650.9	0.6
AX	64,310	2,071	7,663	2.4	651.0	651.0	651.7	0.7
AY	65,050	1,342	3,899	4.6	651.6	651.6	652.4	0.8
AZ	65,800	928	4,101	4.4	654.2	654.2	654.2	0.0
BA	66,510	1,156	5,024	3.6	654.8	654.8	655.6	0.8
BB	66,900	897	5,271	3.4	655.5	655.5	656.2	0.7
BC	67,515	666	4,317	4.2	656.5	656.5	657.1	0.6
BD	68,090	793	6,343	2.9	657.4	657.4	658.2	0.8
BE	68,700	315	3,381	5.4	657.7	657.7	658.4	0.7
BF	69,300	212	2,983	6.1	658.4	658.4	659.2	0.8
BG	69,900	591	4,996	3.6	659.6	659.6	660.5	0.9
BH	70,515	704	6,335	2.9	660.5	660.5	661.3	0.8

[1]Feet above confluence with Snake Creek.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek (cont)								
BI	70,540	632	5,375	3.4	660.4	660.4	661.2	0.8
BJ	71,230	648	6,348	2.0	661.0	661.0	661.8	0.8
BK	71,930	393	3,289	3.8	661.2	661.2	662.0	0.8
BL	72,630	444	3,537	3.5	661.7	661.7	662.6	0.9
BM	73,330	402	2,861	4.9	662.4	662.4	663.2	0.8
BN	74,030	620	3,644	3.9	664.2	664.2	665.1	0.9
BO	74,730	228	2,454	5.8	665.1	665.1	666.0	0.9
BP	75,430	370	2,579	5.5	666.2	666.2	667.2	1.0
BQ	76,630	499	4,348	3.2	670.3	670.3	670.6	0.3
BR	77,330	638	4,129	3.4	670.8	670.8	671.2	0.4
BS	78,030	540	3,932	3.6	671.5	671.5	672.1	0.6
BT	78,730	566	3,320	4.7	672.0	672.0	672.6	0.6
BU	79,430	720	4,548	3.4	673.3	673.3	674.0	0.7
BV	80,130	459	2,477	6.3	674.3	674.3	675.0	0.7
BW	80,830	562	3,680	4.2	676.7	676.7	677.3	0.6
BX	81,530	502	3,097	5.0	677.7	677.7	678.5	0.8
BY	82,255	669	3,150	4.9	679.2	679.2	680.0	0.8
BZ	82,955	828	2,940	5.3	681.3	681.3	681.9	0.6
CA	83,655	1,322	7,571	2.1	683.0	683.0	683.9	0.9
CB	84,355	1,154	5,952	2.6	683.4	683.4	684.2	0.8
CC	85,055	1,669	7,321	2.1	684.1	684.1	684.9	0.8

[1]Feet above confluence with Snake Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DUCK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek Tributary								
A	1,275	513	1,674	4.1	657.8	657.8[2]	658.6	0.8
B	1,675	472	2,209	3.1	659.9	659.9[2]	659.9	0.0
C	2,275	397	2,230	3.8	660.6	660.6[2]	660.9	0.3
D	2,775	460	3,005	2.9	661.1	661.1	661.6	0.5
E	3,205	437	2,406	3.6	661.3	661.3	661.9	0.6
F	3,675	666	3,479	2.5	662.0	662.0	662.6	0.6
G	4,215	772	2,933	2.9	662.5	662.5	663.1	0.6
H	4,625	604	2,900	3.0	663.0	663.0	663.7	0.7
I	5,175	368	2,147	4.0	663.6	663.6	664.4	0.8
J	5,675	161	1,322	6.5	664.2	664.2	664.9	0.7
K	6,075	596	3,425	2.5	665.3	665.3	666.1	0.8
L	6,675	511	2,300	3.7	665.6	665.6	666.4	0.8
M	7,215	134	1,197	7.1	666.2	666.2	667.0	0.8
N	9,070	632	3,378	2.5	673.0	673.0	673.1	0.1
O	9,875	539	3,173	2.7	673.4	673.4	673.7	0.3
P	10,975	461	3,137	2.7	673.9	673.9	674.3	0.4
Q	11,565	579	3,759	2.2	674.2	674.2	674.5	0.3
R	12,175	373	2,467	3.4	674.4	674.4	674.8	0.4
S	12,775	813	2,245	3.8	675.1	675.1	675.5	0.4

[1]Feet above confluence with Duck Creek.
[2]Water-surface elevation computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DUCK CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Duck Creek Tributary (cont)								
T	13,375	490	2,487	3.4	676.4	676.4	677.0	0.6
U	13,975	287	1,148	7.4	677.2	677.2	677.6	0.4
V	14,575	301	1,947	4.3	679.6	679.6	680.4	0.8
W	15,275	357	2,145	3.9	680.7	680.7	681.5	0.8
X	15,875	469	2,365	3.6	681.7	681.7	682.4	0.7
Y	16,440	626	3,547	2.4	682.5	682.5	683.2	0.7
Z	16,850	744	3,204	2.6	682.8	682.8	683.5	0.7
AA	17,445	244	1,407	3.9	683.4	683.4	684.1	0.7
AB	17,955	441	1,781	3.1	684.2	684.2	684.9	0.7
AC	18,555	599	1,924	2.9	685.1	685.1	685.5	0.4
AD	19,160	184	842	6.5	685.8	685.8	686.2	0.4

[1]Feet above confluence with Duck Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

DUCK CREEK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Eagle Creek								
A	733	360	1,172	1.8	608.4	603.7[2]	604.6	0.9
B	1,701	89	488	4.3	608.4	607.2[2]	607.4	0.2
C	2,610	55	541	3.9	612.2	612.2	612.9	0.7
D	3,041	714	1,260	1.7	612.6	612.6	613.3	0.7
E	4,087	150	426	4.9	617.9	617.9	617.8	-0.1
F	5,062	200	1,835	1.1	629.5	629.5	630.4	0.9
G	5,783	200	1,277	1.6	629.5	629.5	630.5	1.0
H	6,213	240	986	2.1	629.7	629.7	630.7	1.0
I	7,894	145	401	4.2	641.5	641.5	642.4	0.9
J	8,831	150	386	4.4	645.5	645.5	646.3	0.8
K	9,046	200	876	1.9	647.3	647.3	648.0	0.7
L	9,367	150	542	3.1	647.6	647.6	648.4	0.8

[1]Feet above confluence with Mingo Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATERSURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
East Branch Haikey Creek								
A	296	360	3,387	3.2	647.5	647.5	648.5	1.0
B	1,683	495	3,803	3.1	650.8	650.8	651.5	0.7
C	2,603	335	2,872	2.0	652.0	652.0	652.7	0.7
D	3,654	341	3,133	1.3	652.5	652.5	653.3	0.8
E	4,286	150	1,064	3.9	653.7	653.7	654.7	1.0
F	5,540	158	1,688	2.4	655.2	655.2	655.6	0.4
G	6,271	184	1,244	5.6	656.2	656.2	657.1	0.9
H	7,227	139	981	2.1	656.8	656.8	657.5	0.8
I	8,311	115	746	7.3	658.3	658.3	659.2	0.9
J	9,307	130	905	4.8	661.5	661.5	662.1	0.5
K	10,228	110	738	7.3	665.4	665.4	666.0	0.6
L	11,359	90	756	5.9	668.0	668.0	668.5	0.5
M	12,080	85	696	5.1	669.8	669.8	670.2	0.4
N	12,710	86	586	7.4	671.2	671.2	671.4	0.2
O	13,750	80	683	6.1	674.1	674.1	674.3	0.2
P	14,615	100	989	2.7	678.0	678.0	678.2	0.2
Q	15,310	110	687	5.4	678.8	678.8	678.8	0.0
R	15,662	110	759	2.8	678.8	678.8	679.0	0.2
S	16,460	110	914	2.3	682.0	682.0	682.1	0.1

[1]Feet above confluence with Haikey Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY
TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

EAST BRANCH HAIKEY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATERSURFACE			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
East Branch Haikey Creek								
T	17,173	100	874	1.5	684.0	684.0	684.1	0.1
U	18,618	110	780	4.0	685.8	685.8	685.9	0.1
V	19,834	70	437	4.8	686.4	686.4	686.4	0.0
W	20,691	90	526	4.0	689.0	689.0	689.0	0.0
X	21,481	190	876	2.0	591.1	691.1	691.2	1.0

[1]Feet above confluence with Haikey Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY
TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

EAST BRANCH HAIKEY CREEK

FLOODING SOURCE		FLOODWAY			BASE 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
East Branch Joe Creek								
A	198	33	303	13.4	657.5[2]	655.5	655.5	0.0
B	1,287	62	535	7.6	665.3	665.3	665.3	0.0
C	2,074	382	865	6.1	666.3	665.5[3]	665.5	0.0
D	2,651	57	429	11.9	666.3	666.3	666.9	0.6
E	3,581	44	177	11.2	671.0	671.0	671.8	0.8
F	4,726	90	233	9.0	676.2	676.2	676.7	0.5
G	6,120	117	586	4.6	683.0	683.0	683.9	0.9
H	7,147	96	440	5.5	688.1	688.1	689.0	0.9
I	8,410	48	388	1.8	691.5	691.5	692.2	0.7
J	9,456	60	397	1.3	697.7	697.7	698.5	0.8
K	10,270	63	92	6.6	705.5	705.5	705.9	0.4

[1]Feet above a point 100ft downstream of E. Skelly Dr.

[2]Elevation computed without consideration of backwater effects from Joe Creek.

[3]Flooding controlled by East Branch Joe Creek Split Flow.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

EAST BRANCH JOE CREEK

FLOODING SOURCE		FLOODWAY			BASE 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
East Branch Joe Creek Split Flow								
A	470	281	1,327	0.9	665.4	665.7[2]	666.5	0.8
B	1,063	171	608	2.0	665.5	665.8[2]	666.8	1.0
C	1,563	688	1,957	0.6	666.3	666.4[2]	667.4	1.0

[1]Feet above confluence with West Branch Joe Creek.

[2]Elevation computed without consideration of backwater.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AN INCORPORATED AREAS

FLOODWAY DATA

EAST BRANCH JOE CREEK SPLIT FLOW

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
East Creek								
A	8,047	575[2]	870	6.2	597.7	597.7	598.7	1.0
B	9,712	181[2]	1,029	5.0	602.5	602.5	602.6	0.1
C	10,594	121[2]	756	6.7	604.3	604.3	604.7	0.4
D	10,926	97[2]	1,010	5.0	608.3	608.3	608.8	0.5
E	11,313	393[2]	2,335	2.2	609.0	609.0	609.5	0.5
F	12,526	608[2]	1,758	3.0	610.4	610.4	610.8	0.4
G	13,358	351	1,291	4.0	612.1	612.1	612.8	0.7
H	13,640	213	1,629	3.2	612.5	612.5	613.3	0.8
I	15,084	396	1,218	4.3	615.6	615.6	615.8	0.2
J	16,641	381	1,818	2.9	618.3	618.3	618.8	0.5
K	16,774	356	1,721	3.0	618.7	618.7	619.3	0.6
L	19,330	266	1,653	2.6	625.8	625.8	626.4	0.6
M	21,505	539	2,432	1.8	630.5	630.5	631.4	0.9
N	22,450	340[2]	712	6.0	632.6	632.6	633.2	0.6
O	24,070	180	849	2.2	639.1	639.1	639.8	0.7
P	24,170	261	378	5.0	649.8	649.8	649.9	0.1
Q - R[3]								
S	28,350	100[2]	171	5.6	664.4	664.4	665.1	0.7

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

EAST CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Elm Creek								
A	1,930	465	3,868	6.2	588.6	580.4[2]	581.1[2]	0.7
B	3,955	238	3,270	6.5	588.6	582.1[2]	582.6[2]	0.5
C	4,600	282	3,529	5.8	588.6	583.0[2]	583.4[2]	0.4
D	5,805	198	2,204	9.2	588.6	586.1[2]	586.4[2]	0.3
E	6,630	260	2,425	10.6	588.6	588.2[2]	588.6[2]	0.4
F	7,700	450	5,259	4.7	596.2	596.2	596.9	0.7
G	8,540	244	1,620	11.4	597.0	597.0	597.2	0.2
H	9,320	322	3,066	6.1	601.5	601.5	602.4	0.9
I	9,715	320	2,745	5.1	602.4	602.4	603.2	0.8
J	10,135	286	2,431	5.9	602.8	602.8	603.6	0.8
K	10,735	328	2,522	5.2	604.2	604.2	605.1	0.9
L	11,240	306	2,059	7.6	604.6	604.6	605.4	0.8
M	11,840	364	2,631	4.5	605.6	605.6	606.4	0.8
N	12,135	300	1,841	7.1	606.1	606.1	606.6	0.5
O	13,300	262	1,824	8.5	611.3	611.3	612.1	0.8
P	13,890	340	2,454	6.7	613.0	613.0	613.7	0.7
Q	14,395	363	2,311	6.3	613.9	613.9	614.7	0.8
R	14,940	320	1,950	7.4	615.2	615.2	616.0	0.8
S	15,722	490	2,322	6.3	616.9	616.9	617.8	0.9
T	16,175	255	1,288	10.5	617.9	617.9	618.7	0.8

[1]Feet above confluence with Bird Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

ELM CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Elm Creek (cont)								
U	16,940	326	2,134	8.7	622.4	622.4	623.2	0.8
V	17,480	328	1,941	6.4	624.0	624.0	624.5	0.5

[1]Feet above confluence with Bird Creek.
[2]Water-surface elevations computed without consideration of backwater effects.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Euchee Creek								
A	279	174	692	10.2	652.2	637.6[2]	637.6	0.0
B	1,429	366	2,158	3.3	653.7	653.7	653.7	0.0
C	1,974	195	1,426	4.9	655.0	655.0	655.0	0.0
D	2,699	185	1,441	4.9	657.1	657.1	657.2	0.1
E	3,254	85	619	11.4	658.7	658.7	659.5	0.8
F	3,889	110	651	10.9	670.5	670.5	671.2	0.7
G	4,379	231	1,280	5.6	675.1	675.1	675.1	0.0
H	5,019	280	1,704	4.2	678.4	678.4	678.5	0.1
I	6,359	377	2,941	2.4	682.7	682.7	683.6	0.9
J	6,969	251	2,634	2.7	683.6	683.6	684.2	0.6
K	7,644	372	3,097	2.3	684.4	684.4	685.0	0.6
L	8,199	457	3,409	2.1	684.7	684.7	685.5	0.8
M	8,974	627	4,755	1.5	685.4	685.4	686.2	0.8
N	9,649	679	4,192	1.7	685.8	685.8	686.7	0.9
O	10,194	415	2,327	3.1	686.4	686.4	687.2	0.8
P	10,878	614	2,476	2.9	688.0	688.0	688.8	0.8
Q	12,011	401	2,696	2.4	690.4	690.4	691.2	0.8

[1]Distance in feet above confluence with Arkansas River.
[2]Water-surface elevations computed without consideration of backwater effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

EUCHEE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Fisher Creek								
A-I[2]								
J	14,600	802	2,973	3.6	658.0	658.0	659.0	1.0
K	16,060	553	2,459	6.7	659.6	659.6	660.6	1.0
L	18,540	372	2,471	4.3	662.9	662.9	663.8	0.9
M	18,661	356	2,236	4.6	663.0	663.0	663.8	0.8
N	18,800	575	3,466	3.4	663.1	663.1	664.1	1.0
O	19,740	752	3,815	3.4	663.4	663.4	664.4	1.0
P	21,800	395	1,943	5.6	664.6	664.6	665.5	0.9
Q	22,250	419	1,846	6.9	665.5	665.5	666.2	0.7
R	22,454	439	1,778	7.1	665.8	665.8	666.6	0.8
S	23,987	490	2,153	6.8	668.3	668.3	668.9	0.6
T	25,116	277	1,120	10.6	672.6	672.6	673.2	0.6
U	26,187	626	1,776	5.9	677.1	677.1	677.9	0.8
V	28,606	160	1,294	5.0	685.6	685.6	686.0	0.4
W	28,942	158	1,009	6.4	685.9	685.9	686.4	0.5
X	29,155	184	1,026	8.7	686.4	686.4	686.9	0.5
Y	29,289	150	799	6.9	686.7	686.7	687.7	1.0
Z	29,635	109	866	6.4	688.2	688.2	689.0	0.8
AA	30,323	227	1,338	7.4	690.9	690.9	691.3	0.4
AB	30,534	162	663	9.8	691.7	691.7	692.0	0.3

[1]Distance in feet above confluence with Arkansas River.
[2]No floodway data.

TABLE

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK
AND INCORPORATED AREAS

FLOODWAY DATA

FISHER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Fisher Creek Tributary								
A	729	87	348	6.4	701.8	701.8	702.7	0.9
B	2,287	88	355	8.5	711.9	711.9	712.2	0.3
C	3,020	178	570	7.0	716.0	716.0	716.8	0.8
D	3,540	142	434	8.7	719.9	719.9	720.1	0.2
E	4,299	115	335	8.4	726.9	726.9	727.2	0.3
F	4,965	56	281	8.5	732.4	732.4	732.7	0.3
G	5,555	68	286	8.9	737.3	737.3	738.0	0.7
H	5,981	191	342	8.4	741.4	741.4	741.4	0.0
I	6,700	86	400	5.6	745.9	745.9	746.6	0.7
J	7,624	127	406	7.5	755.2	755.2	755.7	0.5
K	9,169	104	505	6.3	767.7	767.7	768.7	1.0
L	9,495	126	423	6.7	769.1	769.1	769.8	0.7
M	10,000	50	215	13.0	774.9	774.9	775.9	1.0

[1]Feet above confluence with Fisher Creek.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Flat Rock Creek								
A	3,000	1,500	5,560	4.3	599.1	599.1	600.1	1.0
B	3,950	1,415	10,720	2.2	600.1	600.1	601.1	1.0
C	4,900	1,125	7,234	3.3	600.5	600.5	601.5	1.0
D	6,225	500	5,401	4.4	601.4	601.4	602.4	1.0
E	7,110	300	3,227	7.0	604.7	604.7	604.7	0.0
F	8,660	885	7,905	3.0	606.8	606.8	607.8	1.0
G	9,735	874	7,337	3.2	607.4	607.4	608.3	0.9
H	11,635	1,049	7,520	3.2	608.2	608.2	609.1	0.9
I	13,685	937	5,842	4.1	609.4	609.4	610.3	0.9
J	16,085	1,062	7,290	3.3	611.0	611.0	611.9	0.9
K	17,911	900	5,851	4.1	612.2	611.9	613.0	1.1
L	19,386	1,395	9,454	2.7	613.4	613.4	614.4	1.0
M	21,211	999	5,538	2.8	614.3	614.3	615.3	1.0
N	23,111	999	6,071	2.5	615.7	615.7	616.6	0.9
O	25,611	750	6,223	4.7	617.7	617.7	618.6	0.9
P	27,015	250	2,470	6.2	620.8	620.8	621.6	0.8
Q	27,767	167	1,920	7.9	622.3	622.3	622.6	0.3
R	28,867	152	1,657	7.4	623.4	623.4	624.0	0.6
S	29,792	175	1,571	7.4	626.8	626.8	626.9	0.1
T	31,367	173	1,345	8.6	629.8	629.8	629.9	0.1

[1]Feet above confluence with Bird Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

FLAT ROCK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Flat Rock Creek (cont)								
U	32,367	154	1,401	8.3	632.2	632.2	632.2	0.0
V	33,707	202	1,470	7.8	639.1	639.1	639.1	0.0
W	34,832	175	1,829	6.2	645.0	645.0	645.3	0.3
X	36,132	200	1,950	5.8	647.4	647.4	647.6	0.2

[1]Feet above confluence with Bird Creek.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

FLAT ROCK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Flat Rock Creek Tributary A								
A	825	58	567	4.9	602.3	593.0[2]	594.0	1.0
B	1,975	62	602	4.6	602.6	595.6[2]	596.1	0.5
C	3,625	80	917	3.0	603.2	597.8[2]	598.1	0.3
D	4,926	155	853	3.2	608.2	607.2[2]	607.2	0.0
E	6,076	63	440	6.2	608.8	608.8	609.7	0.9
F	7,101	54	277	9.9	617.1	617.1	617.1	0.0

[1]Feet above confluence with Flat Rock Creek.
[2]Water-surface elevations computed without consideration of coincident flooding effects.

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

TULSA COUNTY, OK

AND INCORPORATED AREAS

FLOODWAY DATA

FLAT ROCK CREEK TRIBUTARY A