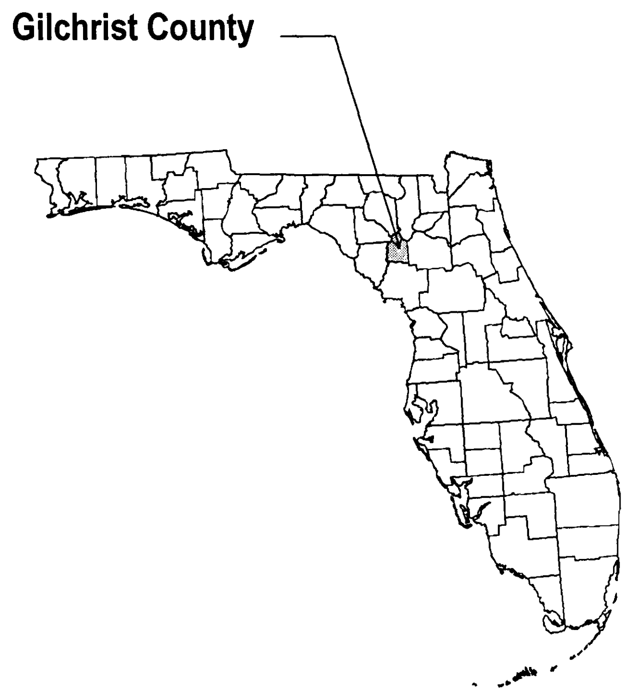
FLOOD INSURANCE STUDY



GILCHRIST COUNTY, FLORIDA
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
FANNING SPRINGS, CITY OF	120146
GILCHRIST COUNTY (UNINCORPORATED AREAS)	120094
TRENTON, CITY OF	120354

REVISED:
September 29, 2006

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
12041CV000A

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 (FIS) 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 FIS may be revised and republished at any time. In addition, part of this FIS may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS components.
Initial FIS Effective Date:

Initial Countywide FIS Effective Date: August 16, 1998

Revised Countywide FIS Date: September 29, 2006

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FLOOD INSURANCE STUDY
GILCHRIST COUNTY, FLORIDA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) investigates the existence and severity of flood hazards in, or revises and updates previous FISs/Flood Insurance Rate Maps (FIRMs) for the geographic area of Gilchrist County, Florida, including: the Cities of Fanning Springs, Trenton, and the unincorporated areas of Gilchrist County (hereinafter referred to collectively as Gilchrist County). The Town of Bell is non-floodprone

The City of Fanning Springs is located in Levy and Gilchrist Counties. Flood Hazard information for the portion of Fanning Springs located in Levy County is included in this FIS for Gilchrist County and Incorporated Areas.

This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the county that will be used to establish actuarial flood insurance rates. This information will also be used by Gilchrist County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and will also be used by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some States or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

This FIS was prepared to include the unincorporated areas of, and incorporated communities within, Gilchrist County in a countywide format. Information on the authority and acknowledge for each jurisdiction included in this countywide FIS, as complied from their previously printed FIS reports, is shown below.

Fanning Springs, City of	the hydrologic and hydraulic analyses for the FIS report dated August 16, 1988, were performed by the U.S. Army Corps of Engineers (USACE), Jacksonville District,

	for the Federal Emergency Management Agency (FEMA) under Inter-Agency Agreement No. EMW-85-E-1822. That work was completed in October 1986.
Gilchrist County (Unincorporated Areas)	the hydrologic and hydraulic analyses for the FIS report dated August 16, 1988, were performed by the USACE, Jacksonville District, for FEMA under Inter-Agency Agreement No. EMW-85-E-1822. That work was completed in October 1986.

The authority and acknowledgements for the City of Trenton are not available because no FIS report was ever published for this community.

For this countywide FIS, revised hydrologic and hydraulic analyses were prepared for FEMA by Dewberry & Davis LLC, as a subcontractor to URS Corporation under contract with the Suwannee River Water Management District (SRWMD), a FEMA Cooperating Technical Partner (CTP).

The digital base map files were derived from U.S. Geological Survey (USGS) Digital Orthophoto Quadrangles, produced at a scale of 1:12,000 from photography dated 2004.

The coordinate system used for the production of the FIRM is Florida State Plane North Coordinate System, referenced to the North American Datum of 1983.

1.3 Coordination

Consultation Coordination Officer's (CCO) meetings may be held for each jurisdiction in this countywide FIS. An initial CCO meeting is held typically with representatives of FEMA, the community, and the study contractor to explain the nature and purpose of a FIS and to identify the streams to be studied by detailed methods. A Preliminary FIRM Coordination Meeting (PFCM) or final CCO meeting is held typically with representatives of FEMA, the community, the CTP and the study contractor to review the results of the study.

The dates of the initial and final CCO or PFCM meetings held for Gilchrist County and the incorporated communities within its boundaries are shown in Table 1, "Initial and Final or PFCM Meetings."

TABLE 1 – INITIAL AND FINAL OR PDCC MEETINGS

Community	For FIS Dated	Initial CCO Date	Final CCO or PFCM Date
Fanning Springs, City of	August 16, 1988	May 6, 1983	September 15, 1987
Gilchrist County (Unincorporated Areas)	August 16, 1988	May 6, 1983	September 15, 1987
Trenton, City of	N/A	N/A	N/A

For this countywide FIS, a PFCM was held on November 17, 2005. The PFCM was attended by representatives of the study contractor, the communities, the State of Florida, the SRWMD, and FEMA.

A final CCO meeting was held on November 17, 2005, and was attended by representatives from FEMA, SRWMD, Gilchrist County, and the City of Trenton.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Gilchrist County, Florida.

All or portions of the Suwannee River and the Santa Fe River were studied by detailed methods. Limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2).

As part of this countywide FIS, updated analyses were included for the flooding sources shown in Table 2, "Scope of Revision."

TABLE 2 – SCOPE OF REVISION

Stream	Limits of Revised or New Detailed Study
Suwannee River	From US 19 upstream to confluence of the Santa Fe River
Santa Fe River	From confluence with the Suwannee River upstream to River Mile 22.

This FIS also incorporates the determination of letters issued by FEMA resulting in map changes (Letters of Map Revisions [LOMR], Letters of Map Revision –

based on Fill [LOMR-F], and Letter of Map Amendments [LOMA]. Previously issued Letter of Map Changes (LOMC) were reviewed countywide and the determination was that none could be incorporated into the FIRM due to scale limitations. Therefore, all previously issued LOMCs in Gilchrist County will be reissued on the effective date of September 29, 2006, for the revised countywide FIRMs.

The areas studied were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction. The scope and methods of study were proposed to, and agreed upon by, FEMA, the SRWMD, and Gilchrist County.

Areas having low development potential or minimal flood hazards were previously studied using approximate analyses.

2.2 Community Description

Gilchrist County is in north-central Florida, 75 miles southwest of the City of Jacksonville. Gilchrist County is bordered on the west by the Suwannee River, which separates it from Dixie County; on the north by the Santa Fe River, which separates it from Suwannee County; on the northwest by Lafayette County; on the northeast by Columbia County; on the east by Alachua County; and on the south by Levy County. Gilchrist County is served by the CSX railroad; State Roads 26, 47, and 129. The 1980 population of Gilchrist County was reported to be 5,767, an increase of 62 percent over the 1970 population of 3,551. According to the 2000 Census, the population of Gilchrist was 14,437, an increase of 49.3 percent from 1990 to 2000.

The City of Trenton is the county seat and the major industries in Gilchrist County are hog raising and watermelon farming.

The county is in the Gulf Coastal lowlands physiographic area with topography ranging from 10 feet to about 75 feet.

On the Suwannee River from river mile 34.0 to river mile 42.0, from river mile 61.0 to the mouth of the Santa Fe River, and along the Santa Fe to the Alachua county line, the Fresh Water Swamp association is adjacent to the river. This association consists of nearly level, very poorly drained soils subject to prolonged flooding.

Adjacent to the Suwannee River from river mile 42.0 to 61.0 is the Chipley-Blanton-Swamp association, which consists of nearly level to gently sloping moderately well drained soils, sandy throughout and moderately well drained soils with thick sandy layers over loamy subsoil and very poorly drained soils (Florida Bureau of Comprehensive Planning, 1975).

The climate of Gilchrist County is semi-tropical, characterized by long, hot summers and mild winters. The average annual rainfall is 54.76 inches, while the average temperatures vary from 56.2 degrees Fahrenheit (°F) in January to 81.2°F in August.

2.3 Principal Flood Problems

The most severe floods in the Suwannee River basin are associated with storms, or sequences of storms, that produce widespread distribution of rainfall for a duration of several days. Flooding occurs in all seasons, but maximum annual stages occur most frequently from February through April as a result of a series of frontal-type rainfall events over the basin.

A number of major floods have occurred on the Suwannee River with the largest flood occurring at Wilcox in April 1948. These floods are shown below in Table 3, "Historical Flood Data."

TABLE 3 - HISTORICAL FLOOD DATA

LOCATION	PEAK DISCHARGE (cfs*)				
SANTA FE RIVER	1964	1998	1948	1934	1993
At State Route 27	17,000	13,500	12,300	11,400	10,800
SUWANNEE RIVER	1948	1928	1973	1984	1998
near Branford	83,900	65,000	54,700	41,400	46,900
near Wilcox	84,700	71,500	55,100	48,400	47,700

* cubic feet per second

2.4 Flood Protection Measures

Flood protection measures are not known to exist within the study area.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this FIS. Flood events of a magnitude which are expected to be equaled or exceeded once on average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the county at the time of completion of this FIS. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each riverine flooding source studied in detail affecting the county.

Precountywide Analyses

The U.S. Geological Survey (USGS) has monitored flows in the Suwannee River basin at two selected gaging stations since 1928 and flow in the Santa Fe River basin since 1934. Regression analyses were used to fill in missing data and to extend records at each gaged location on the Suwannee and the Santa Fe Rivers.

Flood recurrence frequencies were determined by log-Pearson Type III statistical analysis in accordance with procedures found in Water Resources Council Bulletin No. 17B (U.S. Department of the Interior, 1982). On the Santa Fe River, a rainfall runoff model was developed using the standard Soil Conservation Service procedure and the HEC-1 runoff model. The model was calibrated to the Hurricane Dora flood of 1964 and verified by statistical analysis of discharge records from four long-term gages on the Santa Fe River.

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods is shown in Table 4, "Summary of Discharges."

TABLE 4 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES(cfs)			
		10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT
SANTA FE RIVER					
At State Route 27	1,017	9,192	13,791	16,717	22,200
SUWANNEE RIVER					
Near the Town of Wilcox	7,880	34,800	54,000	62,900	85,300

Revised Analysis

A hydrologic analysis was performed on 7 USGS stream gaging stations on the Suwannee River and one stream gaging station on the Santa Fe River. In accordance with the Federal Emergency Management Agency Flood Hazard Mapping Program Map Modernization Guidelines and Specifications for Flood Hazard Mapping Partners Appendix C: Guidance for Riverine Flooding Analyses and Mapping(Appendix C, FEMA, 2003), the analysis was performed using the USGS PEAKFQ program, Annual Flood Frequency Analysis Using Bulletin 17B Guidelines (USGS, 1998). The PEAKFQ computer program was downloaded from the USGS web site http://water.usgs.gov/software/peakfq.html and the peak flow data was acquired from http://nwis.waterdata.usgs.gov/fl/nwis/peak.

As specified in *C.1.2.1 Preliminary Hydrologic Analysis of Appendix C*, the results for the PEAKFQ analysis for those gaging stations with a systemic record of less than 50 years were weighted with the results of the USGS regional regression equation developed for the Suwannee River Water Management District in their 1996 report titled Regional RegressionEequation for the Suwannee River Water Management District from U.S. Geological Survey Water-Resource Investigations Report 96-4176(Report 96-4176) (Giese, G.L., Franklin, M.A., 1996). The regional regression equation is presented below:

$$Q_T = C_T DA^{B1_T}(LK+.6)^{B2_T}$$

where

Q_T is the discharge for a recurrence interval of T-years, in cubic feet per second.

C_T is the regression constant for the recurrence interval, T.

DA is the drainage area, in square miles.

LK is the percentage of the drainage area covered by lakes.

$B1_T$ and $B2_T$ are exponents for various recurrence intervals.

For the recurrence interval of 100 years (T)

$C_T = 584$

$B1_T = .543$

$B2_T = -.591$

Drainage area and percentage of drainage area covered by lake values for the individual stream gaging stations were taken from Appendix 1 of Report 96-4176.

The weighting equation from Report 96-4176 used for the analysis is presented below:

$$\mathrm{Log}Q_{wt}=(N\log Q_g+EY\log Q_r)/(N+EY)$$

where

Q_{wt} is the weighted estimate of the T-year flood at gaged site, in cubic feet per second.

Q_g is the T-year flood estimate for log-Pearson Type III frequency distribution of annual peaks at gaged site, in cubic feet per second.

Q_r is the regional flood estimate for the gaged site, in cubic feet per second.

N is the number of annual peaks used to compute Q_g in years.

EY is the accuracy of the regional flood estimate, in equivalent years.

It should be noted that USGS stream gaging station 0232000 Suwannee River at Luraville, Florida, was not included as part this analysis due to temporal nature of the peak flow data. The data provided by the USGS website gives a total of 22 peak flows values. The data consists of records from 1928 through 1937, 1948, 1959, 1964, 1966, 1973, 1997, 1998, and 2000 through 2003. With 10 pre-1940 data points and only 7 data points for the past 38 years, it was not possible to determine if the systemic records for stream gaging station 2320000 constituted an unbiased and representative sample of the population of all possible annual peaks for the site.

A review of the PEAKFQ analysis found that all of the previous computed flood discharges (as shown in Table 4) fall within the PEAKFQ 95- and 5 percent confidence limits of the recent estimates. In accordance with Appendix C of FEMAs Map Modernization Guidelines and Specifications for Flood Hazard Mapping Partners, it is recommended that the previous flood discharge as shown in Table 4 remain unchanged. Therefore, the discharges listed in Table 4 will be utilized for this FIS.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods for the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in the FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Precountywide Analyses

Cross-section data were obtained by aerial photography for the floodplain areas and from field measurements for the main channel and immediate overbanks (Suwannee River Water Management District, Stream Cross Sections; USACE, Stream Cross Sections). All bridges were field surveyed to obtain elevation data and structural geometry. Cross sections are located on the Suwannee and Santa Fe Rivers with respect to river miles. The distance between river miles is only approximate.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the FIRM (Exhibit 2).

Water-surface elevations of floods of the selected recurrence intervals were computed through use of the USACE HEC-2 step-backwater computer program (USACE, 1976). Roughness coefficients (Manning's "n") used in the hydraulic computations were determined by analyzing known flood events in the Gilchrist County reaches of the Suwannee and Santa Fe Rivers. The roughness coefficients for the main channels ranged from 0.035 to 0.045. For the overbanks, the values ranged from 0.15 to 0.20 on the Suwannee River and from 0.2 to 0.28 on the Santa Fe River.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals. In cases where the 2- and 1-percent annual chance flood elevations are close together, due to limitations of the profile scale, only the 1-percent profile has been shown.

The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations in the precountywide analysis are referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

Revised Analysis

The HEC-2 computer files for the Suwannee River and the Santa Fe River were converted to HEC-RAS files by the SRWMD prior to this revised analysis. For this revised analysis the SRWMD HEC-RAS files for both rivers incorporated new field survey at the following road crossings and the HEC-RAS files were upgraded to version 3.1.3:

Suwannee River

- US Route 19
- CSX Railroad
- County Highway 340

Santa Fe River

- US Route 129
- State Route 47

The new bridge surveys above were conducted to verify the structure geometry and update the adjacent cross sections for any physical changes that have occurred since the effective study. The setup of the bridges in the model was also updated to conform to the recommended bridge modeling approaches presented in the HEC-RAS Users Manual.

All of the above field surveys were established with vertical control in the North America Vertical Datum of 1988 (NAVD 88). Also all of the NGVD 1929 elevation data in the input HEC-RAS files from the SRWMD were converted to NAVD 88. Therefore, the input and output of the revised HEC-RAS files now reflect elevations in NAVD 88.

Qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (NSRS) as First or Second Order Vertical and have a vertical stability classification of A, B, or C are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier.

Bench marks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

- Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)

- Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)

- Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monument below frost line)

- Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

In addition to NSRS bench marks, the FIRM may also show vertical control monuments established by a local jurisdiction; these monuments will be shown on the FIRM with the appropriate designations. Local monuments will only be placed on the FIRM if the community has requested that they be included, and if the monuments meet the aforementioned NSRS inclusion criteria.

To obtain current elevation, description, and/or location information for bench marks shown on the FIRM for this jurisdiction, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their Web site at www.ngs.noaa.gov.

3.3 Vertical Datum

All FISs and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FISs and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD 29). With the finalization of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are being prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD 88. Structure and ground elevations in the community must, therefore, be referenced to NAVD 88. It is important to note that adjacent communities may be referenced to NGVD 29. This may result in differences in base flood elevations across the corporate limits between the communities.

For more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, FEMA Publication FIA-20/June 1992, or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http://www.ngs.noaa.gov).

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance flood elevations and delineations of the 1- and 0.2-percent-annual-chance floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance flood is employed to indicate additional areas of flood risk in the community. For the stream studied in detail, the 1- and 0.2-percent annual chance floodplains have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:2,000 with a contour interval of 2 feet (USGS, 1968, et cetera).

The 1- and 0.2-percent annual chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent annual-chance floodplain boundaries are close together, only the 1-percent- annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

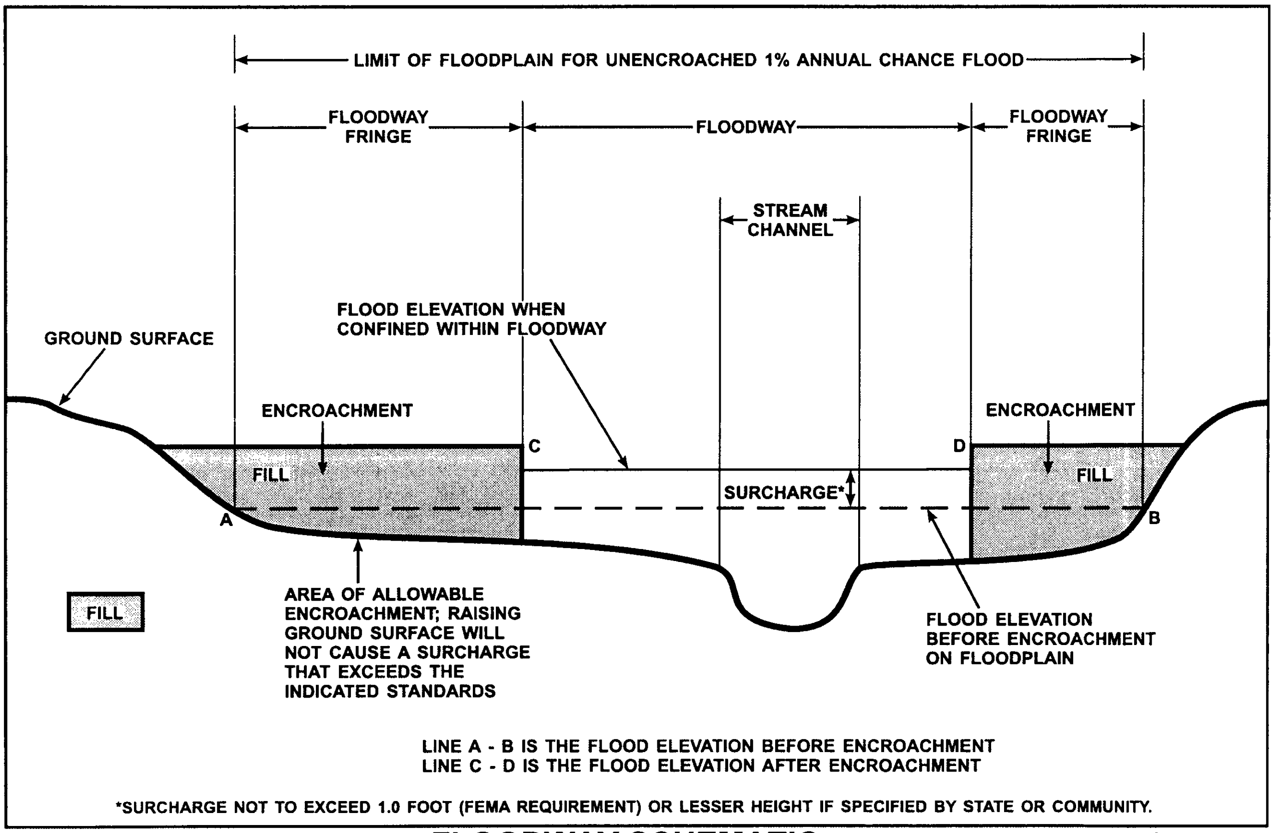
For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent annual chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this FIS report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (Table 5). The computed floodways are shown on the FIRM (Exhibit 2). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.



FLOODWAY SCHEMATIC Figure 1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Santa Fe River								
A	1.61	1,370/995	22,719	0.7	31.7	31.7	32.5	0.8
B	2.88	1,760/1,327	29,329	0.6	32.0	32.0	32.8	0.7
C	3.60	1,610/660	26,505	0.6	32.2	32.2	32.9	0.8
D	4.73	1,452/613	24,845	0.7	32.5	32.5	33.3	0.8
E	6.46	1,601/977	29,834	0.6	32.9	32.9	33.7	0.8
A	35.90	6,736/204	57,686	3.8	19.5	19.5	20.2	0.7
B	36.10	5,835/5,311	78,795	0.9	20.5	20.5	21.3	0.8
F	7.64	1,694/1,287	23,748	0.7	33.2	33.2	34.0	0.8
G	8.43	2,099/811	24,866	0.7	33.4	33.4	34.2	0.8
H	10.06	1,217/720	17,765	0.9	33.9	33.9	34.7	0.8
I	11.30	1,615/782	28,340	0.6	34.2	34.2	35.0	0.8
J	13.03	1,832/980	27,981	0.6	34.6	34.6	35.4	0.8
K	14.08	1,883/1,267	25,312	0.7	34.9	34.9	35.7	0.8
L	15.08	1,643/1,391	22,253	0.7	35.3	35.3	36.1	0.8
M	16.53	1,668/631	25,150	0.7	35.9	35.9	36.7	0.8
N	17.78	1,615/346	21,303	0.8	36.5	36.5	37.4	0.9
O	18.49	1,587/379	18,187	0.9	36.9	36.9	37.9	0.9
P	19.62	1,224/805	18,148	0.9	37.5	37.5	38.5	0.9
Q	20.44	1,368/1,009	19,172	1.0	37.9	37.9	38.8	0.9
R	21.59	541/196	7,915	2.5	39.0	39.0	39.8	0.8
Suwannee River								
A	35.90	760/195	35,724	1.9	19.5	19.5	20.2	0.7
B	36.10	5,907/5,211	78,605	0.9	20.5	20.5	21.2	0.7
C	38.90	4,330/4,000	53,938	1.2	21.1	21.1	22.0	0.9
D	39.76	5,888/3,596	78,788	0.9	22.1	22.1	23.0	0.9
E	41.97	4,100/2,108	65,250	1.0	22.6	22.6	23.6	1.0

[1]Miles above mouth
[2]Width/Width within County boundary

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL AND INCORPORATED AREAS

FLOODWAY DATA

SUWANNEE RIVER - SANTA FE RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Suwannee River (continued)								
F	44.31	4,185/3,801	62,896	1.1	23.3	23.3	24.2	0.9
G	47.35	4,624/1,588	65,427	1.0	24.2	24.2	25.1	0.9
H	50.53	6,1614/2,48	76,832	0.9	25.1	25.1	26.0	0.9
I	52.03	7,711/895	80,665	0.8	25.5	25.5	26.5	1.0
J	53.94	6,679/4,592	98,065	0.7	26.1	26.1	27.0	0.9
K	55.31	4,513/1,905	68,139	1.0	26.4	26.4	27.3	0.9
L	56.53	5,756/228	67,209	1.0	26.7	26.7	27.6	0.9
M	58.20	6,223/5,168	57,231	1.2	27.6	27.6	28.5	0.9
N	59.56	2,863/2,863	65,330	1.0	28.1	28.1	29.0	0.9
O	62.24	8,011/1,730	91,800	0.7	29.0	29.0	30.0	1.0
P	62.67	7,371/1,753	77,868	0.9	29.2	29.2	30.1	0.9
Q	63.27	5,630/1,097	40,855	1.6	29.4	29.4	30.3	0.9
R	65.66	7,019/328	84,707	0.8	30.9	30.9	31.7	0.8

[1]Miles above mouth
[2]Width/Width within County boundary

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL AND INCORPORATED AREAS

FLOODWAY DATA

SANTA FE RIVER

TABLE 5

Portions of the floodways for the Suwannee River and the Santa Fe River extend beyond the county boundary.

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. The zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 1-percent annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AO

Zone AO is the flood insurance rate zone that corresponds to the areas of 1-percent annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within this zone.

Zone AR

Area of special flood hazard formerly protected from the 1-percent annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1-percent annual chance or greater flood event.

Zone A99

Zone A99 is the flood insurance rate zone that corresponds to areas of the 1-percent annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or depths are shown within this zone.

Zone V

Zone V is the flood insurance rate zone that corresponds to the 1-percent annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no base flood elevations are shown within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent annual chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent annual chance floodplain, areas within the 0.2-percent annual chance floodplain, and areas of 1-percent annual chance flooding where average depths are less than 1 foot, areas of 1-percent annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent annual chance flood by levees. No base flood elevations or depths are shown within this zone.

Zone X (Future Base flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The current FIRM presents flooding information for the entire geographic area of Gilchrist County. Previously, separate Flood Hazard Boundary Maps and/or FIRMs were prepared for each identified flood-prone incorporated community and the unincorporated areas of the county. This countywide FIRM also includes flood hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community, up to and including this countywide FIS, are presented in Table 6, "Community Map History."

7.0 OTHER STUDIES

FISs have been prepared for the unincorporated areas of Alachua (FEMA, November 1988), Columbia (FEMA, January 1988), Levy (FEMA, 1984), and Suwannee Counties (FEMA, January 1988). FISs have been prepared for Dixie County and incorporated areas (FEMA, 2006) and Lafayette County and incorporated areas (FEMA, 2006).

This FIS supersedes the previously printed FIS report and FIRM for Gilchrist County and incorporated areas. In addition, this FIS supersedes the FIS report and FIRM for the City of Fanning Springs which was published separately from the Gilchrist County and incorporated areas FIS.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this FIS can be obtained by contacting FEMA, Federal Insurance and Mitigation Division, Koger Center - Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

9.0 BIBLIOGRAPHY AND REFERENCES

Federal Emergency Management Agency. (September 29, 2006). Dixie County, Florida and Incorporated Areas.

Federal Emergency Management Agency. (September 29, 2006). Lafayette County, Florida and Incorporated Areas.

Federal Emergency Management Agency. (August 16, 1988). Gilchrist County, Florida (Unincorporated Areas).

Federal Emergency Management Agency. (November 4, 1988). Alachua County, Florida (Unincorporated Areas).

Federal Emergency Management Agency. (January 6, 1988). Suwannee County, Florida (Unincorporated Areas).

Federal Emergency Management Agency. (January 6, 1988). Columbia County, Florida (Unincorporated Areas).

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Fanning Springs, City of	November 29, 1974	June 27, 1980	September 5, 1984 August 16, 1988	September 29, 2006
Gilchrist County (Unincorporated Areas)	March 19, 1976 January 28, 1977	March 18, 1977	August 16, 1988	September 29, 2006
Trenton, City of		None	August 16, 1988	September 29, 2006

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

TABLE 6

Federal Emergency Management Agency. (January 16, 1987). Flood Insurance Study, Lafayette County, Florida (Unincorporated Areas).

Federal Emergency Management Agency. Flood Insurance Rate Map, March 1, 1984; Flood Insurance Study report, September 1, 1983). Flood Insurance Study, Levy County, FL (Unincorporated Areas).

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Suwannee River Water Management District. Stream Cross Sections, Woolpert Consultants, Dayton, Ohio, compiled by photogrammetric methods for aerial photography.

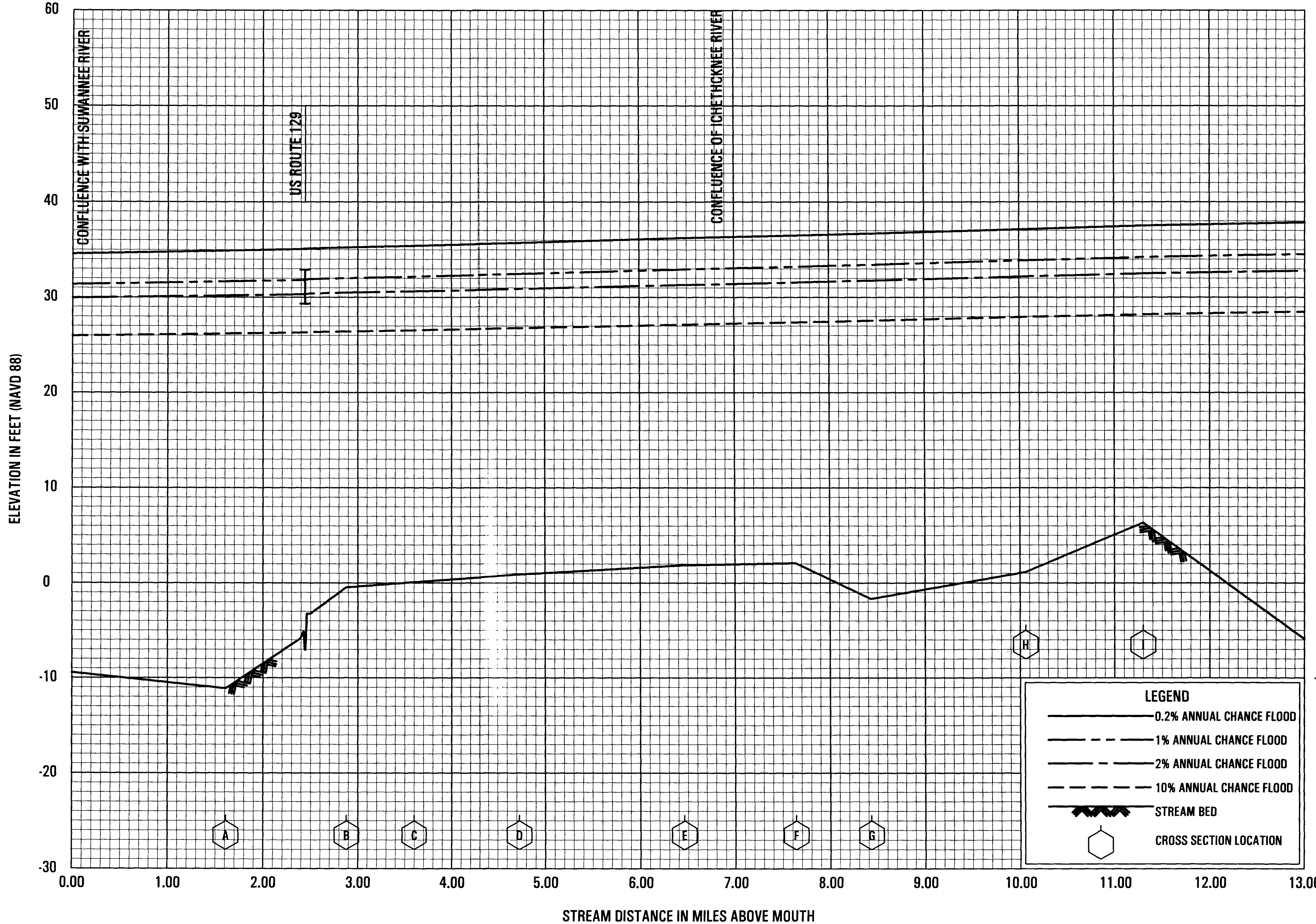
U.S. Army Corps of Engineers, Hydrologic Engineering Center. (November 1976). Generalized Computer Program HEC-2, Water-Surface Profiles. Davis, California.

U.S. Army Corps of Engineers, Jacksonville District. Stream Cross Sections, Southern Resource Mapping, Ormond Beach, Florida, compiled by photogrammetric methods from aerial photography.

U.S. Department of Housing and Urban Development, Federal Insurance Administration. (March 1977). Flood Hazard Boundary Map, Gilchrist County, Florida (Unincorporated Areas).

U.S. Department of the Interior, Geological Survey, Interagency Advisory Committee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee. (September 1981, revised March 1982). Bulletin No. 17B, Guidelines for Determining Flood Flow Frequency.

U.S. Geological Survey. (Bell, 1968; Branford, 1968; Fort White, 1969; Four Mile Lake, 1968; Hatchbend, 1968; High Springs SW, 1969; Hildreth, 1968; Newberry SW, 1968; Suwannee River, 1968; Trenton, 1968; Wannee, 1968; Waters Lake, 1968). 7.5-Minute Series Topographic Maps, Scale 1:2,000, Contour Interval 2 feet.



FLOOD PROFILES

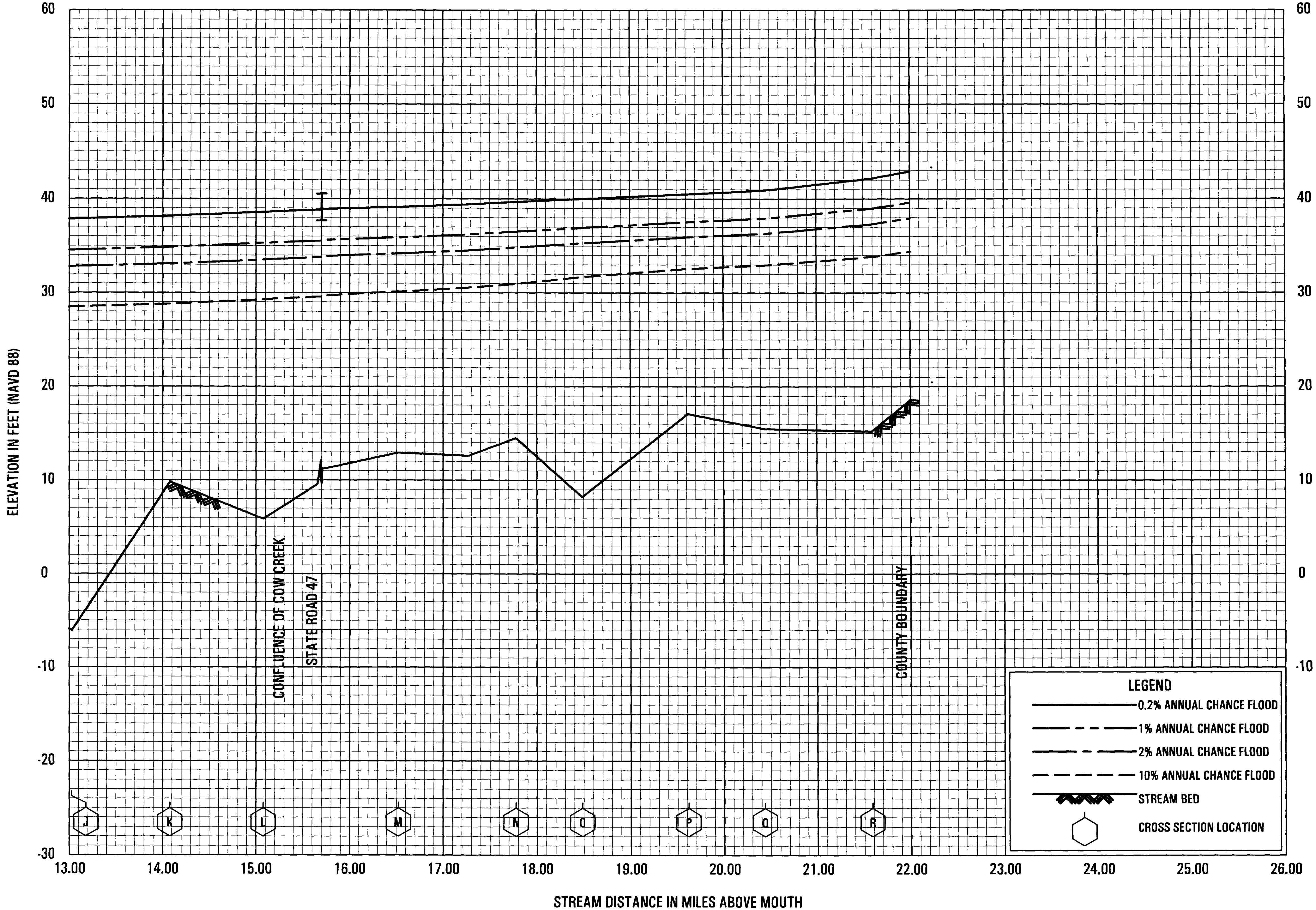
SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL

AND INCORPORATED AREAS

01P



FLOOD PROFILES

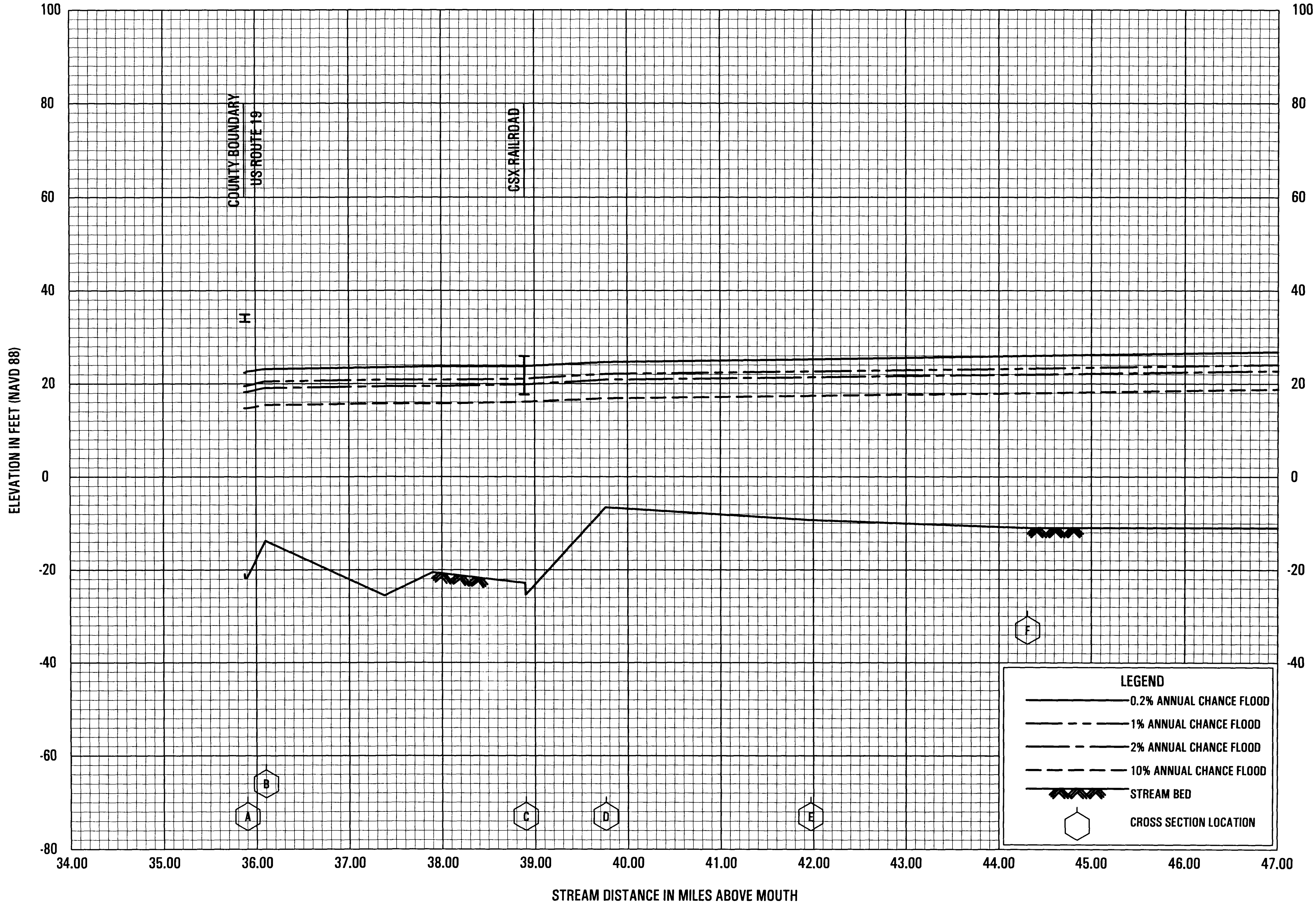
SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL

AND INCORPORATED AREAS

02P

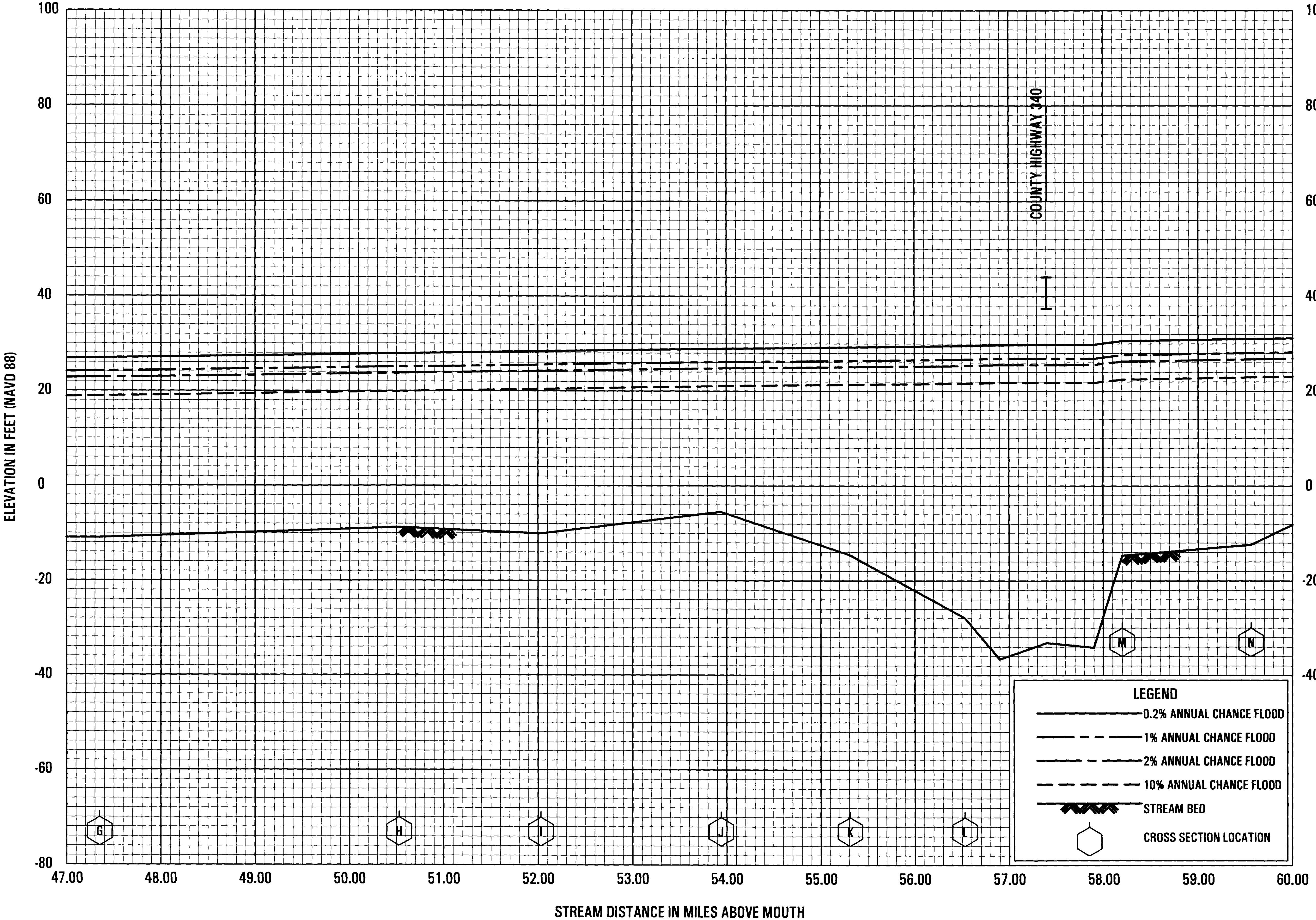


FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL

AND INCORPORATED AREAS

03P



FLOOD PROFILES

SUWANNEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL

AND INCORPORATED AREAS

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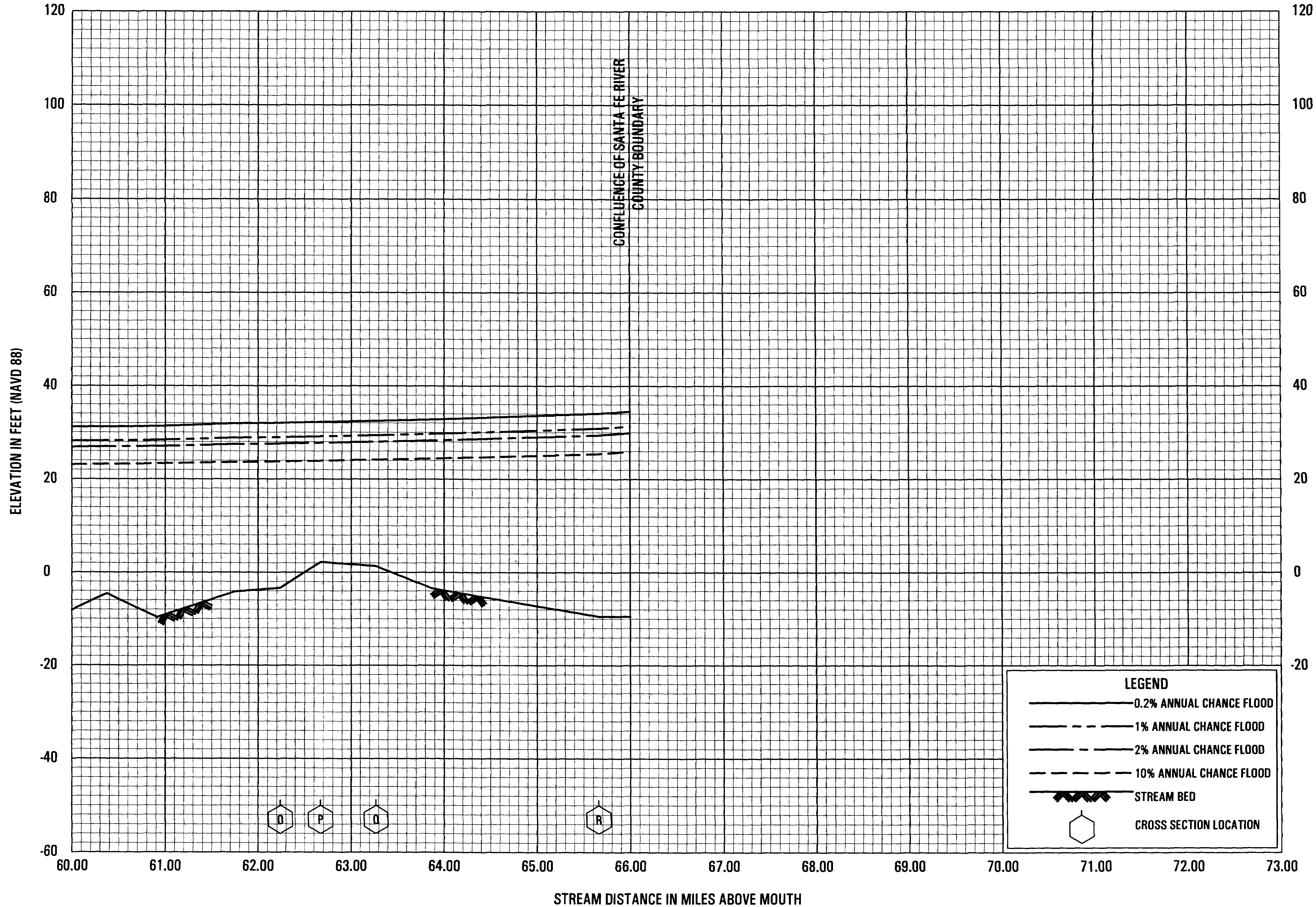

FLOOD PROFILES

SUWANNEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

GILCHRIST COUNTY, FL

AND INCORPORATED AREAS

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