



# Federal Emergency Management Agency

Washington, D.C. 20472

**MAY 27 2004**

SEP 16 2004

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

The Honorable Sharon Bronson  
Chair, Pima County Board  
of Supervisors  
130 West Congress, 11th Floor  
Tucson, AZ 85701

**IN REPLY REFER TO:**

Case No.: 02-09-1039P  
Follows Conditional  
Case No.: 98-09-1156R  
Community Name: Pima County, AZ  
Community No.: 040073  
Effective Date of **SEP 16 2004**  
This Revision:

Dear Ms. Bronson:

The Flood Insurance Study report and Flood Insurance Rate Map for your community have been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panel(s) revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals issued in your community.

Additional documents are enclosed which provide information regarding this LOMR. Please see the List of Enclosures below to determine which documents are included. Other attachments specific to this request may be included as referenced in the Determination Document. If you have any questions regarding floodplain management regulations for your community or the National Flood Insurance Program (NFIP) in general, please contact the Consultation Coordination Officer for your community. If you have any technical questions regarding this LOMR, please contact the Director, Federal Insurance and Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Oakland, California, at (510) 627-7103, or the FEMA Map Assistance Center toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Sincerely,

Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
Mitigation Division  
Emergency Preparedness  
and Response Directorate

For: Doug Bellomo, P.E., CFM, Acting Chief  
Hazard Identification Section  
Mitigation Division  
Emergency Preparedness  
and Response Directorate

List of Enclosures:

- Letter of Map Revision Determination Document
- Annotated Flood Insurance Rate Map
- Annotated Flood Insurance Study Report

cc: (See attached list.)

The Honorable Bobby Sutton, Jr.  
Mayor, Town of Marana

Ms. Suzanne Shields, P.E.  
Deputy Director  
Pima County Flood Control District

Mr. Leo R. Smith, P.E.  
Manager  
Flood Control Engineering Division  
Department of Transportation and Flood Control District  
Pima County

Mr. R. "Terry" Hendricks, CFM  
Chief Hydrologist  
Floodplain Management Division  
Department of Transportation and Flood Control District  
Pima County

Mr. Steve Dolan  
Principal Hydrologist  
Pima County Flood Control District

Mr. Jim DeGrood, P.E.  
Development Services Administrator  
Town of Marana

Mr. Brian Cosson  
NFIP Coordinator  
Arizona Department of Water Resources

Follows Conditional Case No.: 98-09-1156R



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Washington, D.C. 20472

**LETTER OF MAP REVISION  
DETERMINATION DOCUMENT**

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	Pima County Arizona (Unincorporated Areas)	LEVEE EXCAVATION OTHER (BRIDGE AND ROAD IMPROVEMENTS)	HYDRAULIC ANALYSIS LEVEE CERTIFICATION NEW TOPOGRAPHIC DATA
	COMMUNITY NO.: 040073		
IDENTIFIER	Lower Santa Cruz River Levee	APPROXIMATE LATITUDE & LONGITUDE: 32° 24' 09", 111° 08' 47" SOURCE: USGS QUADRANGLE DATUM: NAD 83	

FLOODING SOURCE(S) & REVISED REACH(ES)	Santa Cruz River – from approximately 8,600 feet downstream of Sanders Road to approximately 11,800 feet upstream of Avra Valley Road
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**SUMMARY OF REVISIONS**

Effective Flooding:	Zone AE	Zone X (shaded)	Zone AE	Zone AO (Depth 1)	Floodway	BFEs*
Revised Flooding:	Zone X (shaded)	Zone AE	Zone X (unshaded)	Zone AE	Floodway	BFEs
Increases:	NONE	YES	NONE	YES	YES	YES
Decreases:	YES	NONE	YES	YES	YES	YES

\* BFEs – Base Flood Elevations

ANNOTATED MAPPING ENCLOSURES	ANNOTATED STUDY ENCLOSURES
TYPE: FIRM* NO.: 04019C0980 K Date: February 8, 1999 TYPE: FIRM NO.: 04019C0990 K Date: February 8, 1999 TYPE: FIRM NO.: 04019C0995 K Date: February 8, 1999	DATE OF EFFECTIVE FLOOD INSURANCE STUDY REPORT: February 8, 1999 FLOODWAY DATA TABLE PROFILE: 156P PROFILE: 157P

\* FIRM – Flood Insurance Rate Map; \*\* FBFM – Flood Boundary and Floodway Map; \*\*\* FHBM – Flood Hazard Boundary Map

**DETERMINATION**

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2677 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*MHC 10 Lym*

Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
Mitigation Division  
Emergency Preparedness and Response Directorate



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**LETTER OF MAP REVISION  
DETERMINATION DOCUMENT (CONTINUED)**

**OTHER COMMUNITIES AFFECTED BY THIS REVISION**

**CID Number:** 040118     **Name:** Town of Marana, Arizona

AFFECTED MAP PANELS			AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT
TYPE: FIRM	NO.: 04019C0960 K	Date: February 8, 1999	DATE OF EFFECTIVE FLOOD INSURANCE STUDY REPORT: February 8, 1999 FLOODWAY DATA TABLE PROFILE: 154 P PROFILE: 155 P PROFILE: 156 P PROFILE: 157 P PROFILE: 158 P
TYPE: FIRM	NO.: 04019C0970 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C0980 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C0985 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C0990 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C0995 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C1015 K	Date: February 8, 1999	
TYPE: FIRM	NO.: 04019C1015 K	Date: February 8, 1999	

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2677 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*MHC 10 Lym*

Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
Mitigation Division  
Emergency Preparedness and Response Directorate     10080301.DA02091039E102IAC



# Federal Emergency Management Agency

Washington, D.C. 20472

## LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

### COMMUNITY INFORMATION

#### APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the modified channel rests with your community. We may request that your community submit a description and schedule of channel activities.

#### COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2677 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*MHC 10 L/n*

Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
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## LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

### COMMUNITY INFORMATION (CONTINUED)

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Ms. Sally M. Ziolkowski  
Director, Federal Insurance and Mitigation Division  
Federal Emergency Management Agency, Region IX  
1111 Broadway Street, Suite 1200  
Oakland, CA 94607-4052  
(510) 627-7103

### STATUS OF THE COMMUNITY NFIP MAPS

We are processing a revised FIRM and FIS report for Pima County; therefore, we will not physically revise and republish the FIRM and FIS report for your community to incorporate the modifications made by this LOMR at this time. Preliminary copies of the revised FIRM and FIS report were submitted to your community for review on March 22, 2004. We will incorporate the modifications made by this LOMR into the revised FIRM and FIS report before they become effective.

This revision included the effects of improvements to Avra Valley Road and the Avra Valley Road bridge along the revised reach of the Santa Cruz River.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2677 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*MHC 10 Ljra*  
Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
Mitigation Division

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**LETTER OF MAP REVISION  
DETERMINATION DOCUMENT (CONTINUED)**

**PUBLIC NOTIFICATION OF REVISION**

Within 90 days of the second publication in the local newspaper, a citizen may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised BFEs presented in this LOMR may be changed.

This information will be published in the *Federal Register* and your local newspaper as detailed below.

LOCAL NEWSPAPER Name: *Tucson Citizen*  
Dates: 06/10/2004 06/17/2004

**PUBLIC NOTIFICATION**

FLOODING SOURCE	LOCATION OF REFERENCED ELEVATION	BFE (FEET NGVD)		MAP PANEL NUMBER(S)
		EFFECTIVE	REVISED	
Santa Cruz River	Approximately 6,700 feet upstream of Sanders Road	1,998	1*	04019C0990 K
	Approximately 4,900 feet downstream of Quarry Road	2,050	2,048	04019C0995 K
	Approximately 3,600 feet downstream of Quarry Road	1*	2,054	04019C0995 K
	Approximately 600 feet upstream of Avra Valley Road	2,069	2,072	04019C0995 K

\*Depth above ground, rounded to the nearest whole foot

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2677 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*Max H. Yuan*

Max H. Yuan, P.E., Project Engineer  
Hazard Identification Section  
Mitigation Division  
Emergency Preparedness and Response Directorate 10080301.DA02091039E102IAC

**CHANGES ARE MADE IN DETERMINATIONS OF BASE FLOOD ELEVATIONS FOR THE TOWN OF MARANA AND THE UNINCORPORATED AREAS OF PIMA COUNTY, ARIZONA, UNDER THE NATIONAL FLOOD INSURANCE PROGRAM**

On February 8, 1999, the Department of Homeland Security's Federal Emergency Management Agency identified Special Flood Hazard Areas (SFHAs) in the Town of Marana and in the unincorporated areas of Pima County, Arizona, through issuance of a Flood Insurance Rate Map (FIRM). The Mitigation Division has determined that modification of the elevations of the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood) for certain locations in these communities is appropriate. The modified Base Flood Elevations (BFEs) revise the FIRM for the communities.

The changes are being made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (Public Law 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, Public Law 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65.

A hydraulic analysis was performed to incorporate the effects along the Santa Cruz River of construction of a levee from just upstream of Sanders Road to approximately 9,300 feet upstream of Avra Valley Road; road and bridge improvements from just upstream to approximately 4,000 feet downstream of Avra Valley Road; excavation from approximately 13,000 feet downstream of Quarry Road to approximately 5,600 feet upstream of Avra Valley Road; and updated topographic information. This has resulted in a revised delineation of the regulatory floodway, increases and decreases in SFHA width, and increased and decreased BFEs for the Santa Cruz River. The table below indicates existing and modified BFEs for selected locations along the affected lengths of the flooding source(s) cited above.

Location	Existing BFE (feet)*	Modified BFE (feet)*
<sup>1</sup> Approximately 100 feet downstream of Sanders Road	1,980	1,978
<sup>2</sup> Approximately 6,700 feet upstream of Sanders Road	1,998	1 <sup>#</sup>
<sup>1</sup> Approximately 12,000 feet downstream of Quarry Road	1 <sup>#</sup>	2,030
<sup>2</sup> Approximately 4,900 feet downstream of Quarry Road	2,050	2,048
<sup>2</sup> Approximately 3,600 feet downstream of Quarry Road	1 <sup>#</sup>	2,054
<sup>2</sup> Approximately 600 feet upstream of Avra Valley Road	2,069	2,072
<sup>1</sup> Approximately 9,400 feet upstream of Avra Valley Road	2,091	2,093

\*National Geodetic Vertical Datum, rounded to nearest whole foot

<sup>#</sup>Depth above ground, rounded to nearest whole foot

<sup>1</sup>Town of Marana

<sup>2</sup>Unincorporated areas of Pima County

Under the above-mentioned Acts of 1968 and 1973, the Mitigation Division must develop criteria for floodplain management. To participate in the National Flood Insurance Program (NFIP), the community must use the modified BFEs to administer the floodplain management measures of the NFIP. These

modified BFEs will also be used to calculate the appropriate flood insurance premium rates for new buildings and their contents and for the second layer of insurance on existing buildings and contents.

Upon the second publication of notice of these changes in this newspaper, any person has 90 days in which he or she can request, through the Chief Executive Officer of the community, that the Mitigation Division reconsider the determination. Any request for reconsideration must be based on knowledge of changed conditions or new scientific or technical data. All interested parties are on notice that until the 90-day period elapses, the Mitigation Division's determination to modify the BFEs may itself be changed.

Any person having knowledge or wishing to comment on these changes should immediately notify:

The Honorable Bobby Sutton, Jr.  
Mayor, Town of Marana  
13251 North Lon Adams Road  
Marana, AZ 85653

OR

The Honorable Sharon Bronson  
Chair, Pima County Board of Supervisors  
130 West Congress, 11th Floor  
Tucson, AZ 85701

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