



# Federal Emergency Management Agency

Washington, D.C. 20472

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JUN 24 2013

RBF CONSULTING

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

The Honorable Tom Tait  
Mayor, City of Anaheim  
200 South Anaheim Blvd  
Anaheim, CA 92805

IN REPLY REFER TO:

Case No.: 13-09-0961P  
Community Name: City of Anaheim, CA  
Community No.: 060213  
Effective Date of  
This Revision: November 1, 2013

Dear Mayor Tait:

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, Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Oakland, California, at (510) 627-7175, 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,

Beth A. Norton, Program Specialist  
Engineering Management Branch  
Federal Insurance and Mitigation Administration

For: Luis Rodriguez, P.E., Chief  
Engineering Management Branch  
Federal Insurance and Mitigation Administration

List of Enclosures:

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

cc: Mr. Jonathan Borrego, Principal Planner  
City of Anaheim Planning Department  
200 South Anaheim Boulevard  
Anaheim, CA 92805

Mr. Ricardo Pineda, P.E., CFM  
State of California Floodplain Manager  
California Department of Water Resources  
3464 El Camino Avenue, Suite 200  
Sacramento, CA 95821

Mr. Michael A. Dole, P.E.  
RBF Consulting  
14725 Alton Parkway  
Irvine, CA 92618

bcc: Regional Administrator R9-MT  
PTS: BA: AH: skulkarni\_pts  
MT-RA-EM: B.A. Norton, Program Specialist  
State Coordinator  
RSC-9  
LOMC Subscription Service



# Federal Emergency Management Agency

Washington, D.C. 20472

## LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of Anaheim Orange County California	NO PROJECT	HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS NEW TOPOGRAPHIC DATA
	COMMUNITY NO.: 060213		
IDENTIFIER	Atwood Channel Floodplain Study	APPROXIMATE LATITUDE & LONGITUDE: 33.867, -117.818 SOURCE: Other      DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM*      NO.: 06059C0152J      DATE: December 3, 2009 TYPE: FIRM      NO.: 06059C0156J      DATE: December 3, 2009		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 3, 2009 SUMMARY OF DISCHARGES TABLE: 7	

Enclosures reflect changes to flooding sources affected by this revision.

\* FIRM - Flood Insurance Rate Map

### FLOODING SOURCE(S) & REVISED REACH(ES)

Atwood Channel - from just upstream of the intersection of Orangethorpe Avenue and Lakeview Avenue to just downstream of the intersection of Orangethorpe Avenue and East Richfield Channel

### SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Atwood Channel	Zone A	Zone A	NONE	YES
	Zone AH	Zone AO	NONE	YES
	Zone AO	Zone AO	NONE	YES
	Zone AH	Zone AH	YES	YES

### 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 Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*Beth A Norton*

Beth A. Norton, Program Specialist  
Engineering Management Branch  
Federal Insurance and Mitigation Administration

13-09-0961P

102-I-A-C



Federal Emergency Management Agency  
Washington, D.C. 20472

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

**FLOODING SOURCE(S) & REVISED REACH(ES)**

Atwood Channel - from just upstream of the intersection of Orangethorpe Avenue and Lakeview Avenue to just downstream of the intersection of Orangethorpe Avenue and East Richfield Channel

**SUMMARY OF REVISIONS**

<b>Flooding Source</b>	<b>Effective Flooding</b>	<b>Revised Flooding</b>	<b>Increases</b>	<b>Decreases</b>
Atwood Channel	Zone A	Zone AE	YES	YES
	Zone X (shaded)	Zone X (shaded)	YES	YES
	Zone AO	Zone X (shaded)	NONE	YES
	Zone AH	Zone X (shaded)	NONE	YES
	BFEs*	BFEs	YES	YES

\* BFEs - Base Flood Elevations

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 Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Federal Insurance and Mitigation Administration



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## 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.

#### COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance discharges computed in the submitted hydrologic model. Future development of projects upstream could cause increased discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on discharges and could, therefore, indicate that greater flood hazards exist 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.

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.

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 Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Engineering Management Branch  
Federal Insurance and Mitigation Administration



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

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, Mitigation Division  
Federal Emergency Management Agency, Region IX  
1111 Broadway Street, Suite 1200  
Oakland, CA 94607-4052  
(510) 627-7175

**STATUS OF THE COMMUNITY NFIP MAPS**

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

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 Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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

**PUBLIC NOTIFICATION OF REVISION**

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below and through FEMA's Flood Hazard Mapping website at [https://www.floodmaps.fema.gov/fhm/Scripts/bfe\\_main.asp](https://www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp).

LOCAL NEWSPAPER      Name: *Anaheim Bulletin*  
Dates: June 27, 2013 and July 4, 2013

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 flood hazard determination information presented in this LOMR may be changed.

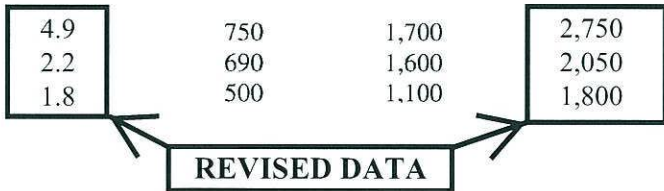
This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

*Beth A. Norton*

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Engineering Management Branch  
Federal Insurance and Mitigation Administration

TABLE 7 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs)			
		10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT
<b>ALAMEDA STORM CHANNEL</b>					
At confluence Santiago Creek	4.5	850	2,100	2,800	5,100
Approximately 800 feet downstream of Orange Park Acres Boulevard	4.1	800	2,000	2,700	4,800
<b>ALIPAZ STORM CHANNEL</b>					
At confluence Trabuco Creek	0.6	86	250	400	890
At Alpez Street	0.3	50	140	220	490
<b>ANAHEIM-BARBER CITY CHANNEL</b>					
At Euclid Street	3.9	500	950	1,300	2,800
At Cerritos Avenue	1.8	300	550	750	1,600
At Ball Road	1.3	230	450	600	1,300
<b>AGUA CHINON WASH</b>					
At San Diego Creek	11.4	1,600	3,800	5,100	9,300
At Santa Ana Freeway	10.4	1,400	3,200	4,700	8,300
<b>ATWOOD CHANNEL</b>					
At confluence Miller Basin-Carbon Canyon Diversion Channel	9.4	1,700	4,000	5,500	11,000
Upstream of confluence Richfield Channel	4.9	750	1,700	2,750	4,700
At Taylor Street	2.2	690	1,600	2,050	4,300
At Imperial Highway	1.8	500	1,100	1,800	2,900
<b>BARRANCA CHANNEL</b>					
At confluence San Diego Creek	2.3	340	740	1,000	1,900
At Barranca Road	1.2	210	450	630	1,150
At Red Hill Avenue	0.7	150	330	400	850
<b>BEE CANYON WASH</b>					
At San Diego Creek	2.2	900	1,400	1,800	4,200
At Santa Ana Freeway	1.7	900	1,100	1,600	8,000



REVISED TO REFLECT  
LOMR EFFECTIVE: NOVEMBER 1, 2013

**Legend**

- 1% annual chance (100-Year) Floodplain
- 1% annual chance (100-Year) Floodway
- 0.2% annual chance (500-Year) Floodplain

**MAP SCALE 1" = 500'**

0 150 250 500 FEET METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0152J**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**ORANGE COUNTY,**  
**CALIFORNIA**  
**AND INCORPORATED AREAS**

**PANEL 152 OF 539**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

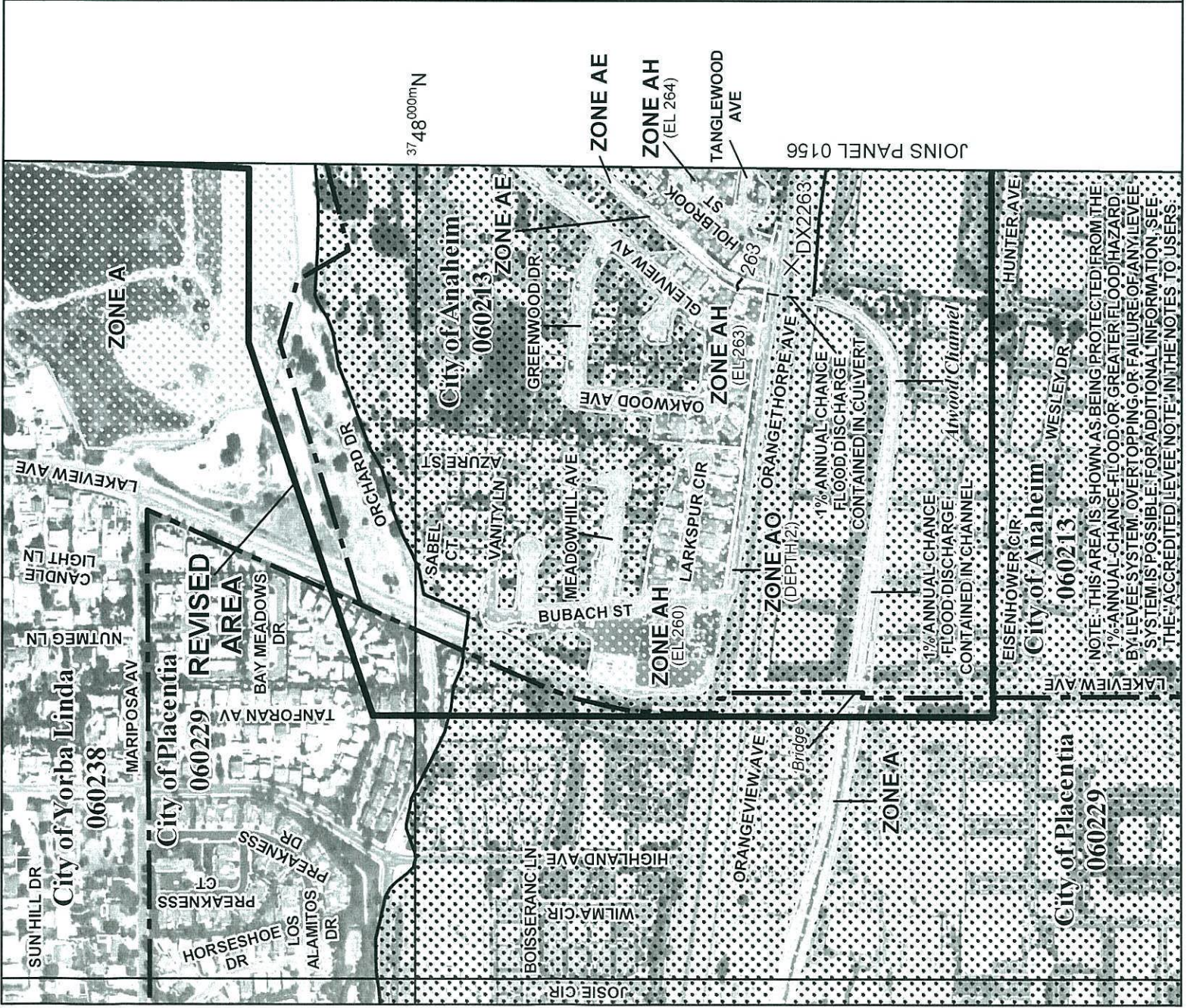
COMMUNITY	NUMBER	PANEL	SUFFIX
ANAHEIM, CITY OF	060213	0152	J
ORANGE, CITY OF	060228	0152	J
PLACENTIA, CITY OF	060229	0152	J
YORBA LINDA, CITY OF	060238	0152	J

REVISED TO REFLECT  
 LOMR EFFECTIVE  
 NOVEMBER 1, 2013

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

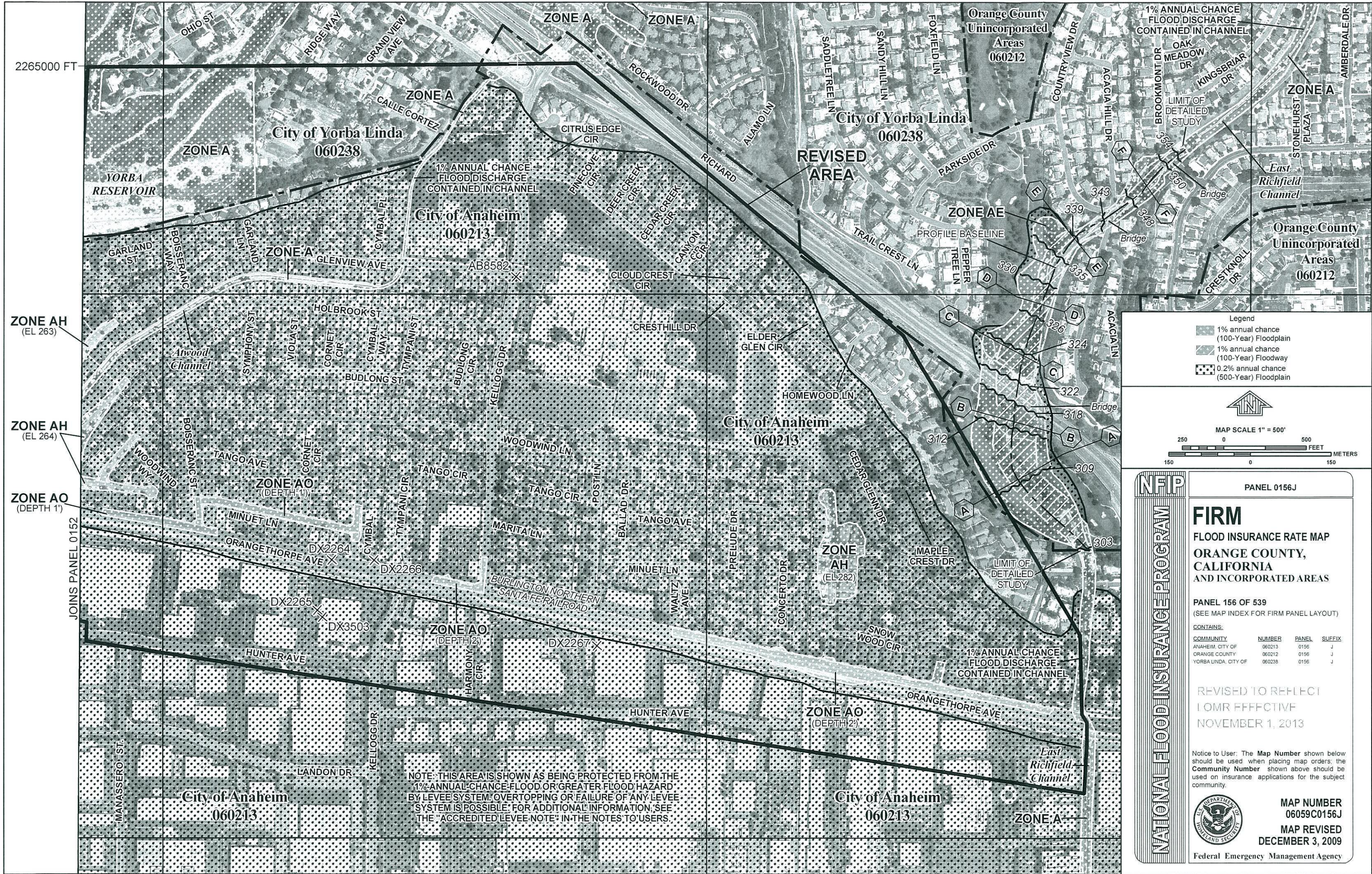


**MAP NUMBER**  
 06059C0152J  
**MAP REVISED**  
 DECEMBER 3, 2009  
 Federal Emergency Management Agency



NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1% ANNUAL-CHANGE-FLOOD OR GREATER FLOOD HAZARD BY LEVEE SYSTEM. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE ACCREDITED LEVEE NOTE IN THE NOTES TO USERS.





2265000 FT

ZONE AH (EL 263)

ZONE AH (EL 264)

ZONE AO (DEPTH 1')

JOINS PANEL 0152

NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD OR GREATER FLOOD HAZARD BY LEVEE SYSTEM. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE "ACCREDITED LEVEE NOTE" IN THE NOTES TO USERS.

Legend

- 1% annual chance (100-Year) Floodplain
- 1% annual chance (100-Year) Floodway
- 0.2% annual chance (500-Year) Floodplain

MAP SCALE 1" = 500'

250 0 500 FEET METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0156J

**FIRM**  
FLOOD INSURANCE RATE MAP  
ORANGE COUNTY, CALIFORNIA  
AND INCORPORATED AREAS

PANEL 156 OF 539  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ANAHEIM, CITY OF	060213	0156	J
ORANGE COUNTY	060212	0156	J
YORBA LINDA, CITY OF	060238	0156	J

REVISED TO REFLECT I OMR EFFECTIVE NOVEMBER 1, 2013

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER 06059C0156J  
MAP REVISED DECEMBER 3, 2009

Federal Emergency Management Agency