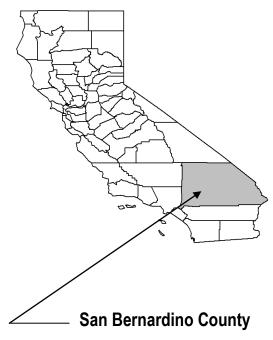


SAN BERNARDINO COUNTY, CALIFORNIA

**AND INCORPORATED AREAS** 

COMMUNITY NAME	<b>COMMUNITY NUMBER</b>
ADELANTO, CITY OF	060639
APPLE VALLEY, TOWN OF	060752
BARSTOW, CITY OF	060271
BIG BEAR LAKE, CITY OF	060731
CHINO, CITY OF	060272
CHINO HILLS, CITY OF	060754
COLORADO RIVER INDIAN RESERVATION	060069
COLTON, CITY OF	060273
FONTANA, CITY OF	060274
FORT MOJAVE INDIAN RESERVATION	060743
GRAND TERRACE, CITY OF	060737
HESPERIA, CITY OF	060733
HIGHLAND, CITY OF	060732
LOMA LINDA, CITY OF	065042
MONTCLAIR, CITY OF	060276
NEEDLES, CITY OF	060277
ONTARIO, CITY OF	060278
RANCHO CUCAMONGA, CITY OF	060671
REDLANDS, CITY OF	060279
RIALTO, CITY OF	060280
SAN BERNARDINO, CITY OF	060281
SAN BERNARDINO COUNTY,	
(UNINCORPORATED AREAS)	060270
TWENTYNINE PALMS, CITY OF	060734
UPLAND, CITY OF	065067
VICTORVILLE, CITY OF	065068
YUCAIPA, CITY OF	060739
YUCCA VALLEY, TOWN OF	060750



REVISED: September 2, 2016



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER 06071CV004D

# 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.

**ATTENTION:** On FIRM panels 06061C7930J, 06061C7940J, 06061C8709J, and 06061C8730J, the Cable Creek, Macy Basin, and Mill Creek levees have not been demonstrated by the community or levee owner to meet the requirements of Section 65.10 of the NFIP regulations in 44 CFR as it relates to the levee's capacity to provide 1-percent- annual -chance flood protection. The subject areas are identified on FIRM panels (with notes and bounding lines) and in the FIS report as potential areas of flood hazard data changes based on further review.

FEMA has updated the levee analysis and mapping procedures for non-accredited levees. Until such time as FEMA is able to initiate a new flood risk project to apply the new procedures, the flood hazard information on the aforementioned FIRM panel(s) that are affected by Cable Creek, Macy Basin, and Mill Creek levees are being added as a snapshot of the prior previously effective information presented on the FIRMs and FIS reports dated August 28, 2008. As indicated above, it is expected that affected flood hazard data within the subject area could be significantly revised. This may result in floodplain boundary changes, 1-percent- annual -chance flood elevation changes, and/or changes to flood hazard zone designations.

The effective FIRM panels (and the FIS report) will again be revised at a later date to update the flood hazard information associated with the Cable Creek, Macy Basin, and Mill Creek levees when FEMA is able to initiate and complete a new flood risk project to apply the updated levee analysis and mapping procedures.

This FIS report was revised on September 2, 2016. Users should refer to Section 10.0, Revisions 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 this FIS report should be aware that the information presented in Section 10.0 supersedes information in Sections 1.0 through 9.0 of this FIS report.

Initial Countywide FIS Effective Date: March 18, 1996 First Revised Countywide FIS Date: August 28, 2008

Second Revised Countywide FIS Date: September 26, 2014

Third Revised Countywide FIS Date: February 18, 2015 Fourth Revised Countywide FIS Date: September 2, 2016

# <u>TABLE OF CONTENTS</u> - Volume 1 – September 2, 2016

			<u>Page</u>
1.0	INTR	ODUCTION	1
	1.1	Purpose of Study	1
	1.2	Authority and Acknowledgments	1
	1.3	Coordination	3
2.0	AREA	A STUDIED	4
	2.1	Scope of Study	4
	2.2	Community Description	7
	2.3	Principal Flood Problems	10
	2.4	Flood Protection Measures	18
3.0	<b>ENGI</b>	NEERING METHODS	29
	3.1	Hydrologic Analyses	30
	3.2	Hydraulic Analyses	55
	3.3	Vertical Datum	73
4.0	FLOC	75	
	4.1	Floodplain Boundaries	75
	4.2	Floodways	77
5.0	INSU	RANCE APPLICATIONS	110
6.0	FLOC	DD INSURANCE RATE MAP	111
7.0	<u>OTHI</u>	111	
8.0	LOCA	115	
9.0	BIBL	IOGRAPHY AND REFERENCES	115
10.0	<u>REVI</u>	SION DESCRIPTIONS	120
	10.1	First Revision	120
	10.2	Second Revision	124
	10.3	Third Revision	125
	10.4	Fourth Revision	126
	10.5	Fifth Revision	129
	10.6	Sixth Revision	134
	10.7	Seventh Revision	137
	10.8	Eighth Revision	161
	10.9	Ninth Revision	163
	10.10	Tenth Revision	164

# <u>TABLE OF CONTENTS</u> – Volume 1 (continued)

### **FIGURES**

		<u>Page</u>	
Figure 1 - Floodway Schematic		78	
<u>TABLES</u>			
Table 1 – Flood Insurance Study Contractors		2	
Table 2 – Initial and Final CCO Meetings		3-4	
Table 3 – Flooding Sources Studied by Detailed Methods			
Table 4 – Flooding Sources Studied by Approximate Methods		6-7	
Table 5 – Historical Recorded Peak Flows		18	
Table 6 – Stream Gaging Stations		37-40	
Table 7 – Summary of Discharges		40-54	
Table 8 – Summary of Elevations		55	
Table 9 – Summary of Manning's "n" Values		60-61	
Table 10 – Vertical Datum Offset Table		73-74	
Table 11 – Floodway Data		80-107	
Table 12 – Community Map History		112-114	
Table 13 – List of Levees		140-143	
Table 14 – Letters of Map Correction, Revision 7		158-161	
Table 15 – Letters of Map Correction, Revision 8		162	
Table 16 – List of PAL Levees Determined To No Longer Be in a	Levee Condition	165	
Table 17 – Letters of Map Correction, Revision 10			
TABLE OF CONTENTS – Volume 2			
<u>EXHIBITS</u>			
Exhibit 1 – Flood Profiles 11th Street Storm Drain Antelope Valley Wash Armory Creek Arrowhead Channel Cable Creek Cable Creek Channel Carbon Canyon Creek Chicken Springs Creek	Panels 01P-04P Panels 05P-09P Panels 10P-11P Panels 12P-13P Panels 14P-21P Panel 22P Panels 23P-25P Panels 26P-33P		

# <u>TABLE OF CONTENTS</u> – Volume 2 (continued)

# $\underline{\textbf{EXHIBITS}} \textbf{-} \textbf{continued}$

Exhib	it 1 –	Flood	l Profiles	(continued)	)
-------	--------	-------	------------	-------------	---

1 100d 1 10111es (continued)		
Chino Creek	Panels	34P-35P
City Creek	Panels	36P-39P
Del Rosa Channel	Panels	40P-49P
Desert Knolls Wash	Panels	50P-53P
Devil Creek (With Levee)	Panels	53aP-53fP
Devil Creek (Without Levee)	Panels	53gP-53lP
East Adelanto Channel	Panel	54P
East Rialto Storm Drain	Panels	55P-56P
Etiwanda/San Sevaine System	Panels	57P-61bP
Grout Creek	Panel	62P
Highgrove Channel	Panels	63P-65P
Hook Creek	Panels	66P-71P
Houston Creek	Panels	72P-74P
Joshua Tree Creek	Panels	75P-77P
Kuffel Canyon Creek	Panel	78P
Lenwood Creek	Panels	79P-81P
Little Mountain Channel-Devil Creek-		
Western Avenue Storm Drain	Panels	82P-87P
Little Sand Creek	Panels	88P-93P
Lytle Creek (East Branch)	Panels	94P-95cP
Lytle Creek and South Fork Lytle Creek	Panels	96P-97P
Middle Fork Lytle Creek	Panels	98P-99P
-		

### <u>TABLE OF CONTENTS</u> – Volume 3

### **EXHIBITS** - continued

T 1 '1 '4	1	T1 1	D C1	<i>(</i>	1\
Exhibit	1 —	Flood	Profiles	(continue	a)

1 100d 1 10111cs (continued)	
Mojave River (At Barstow)	Panels 100P-109P
Mojave River (At Hesperia and Apple Valley)	Panels 109aP-109bP
Mojave River (Below Victorville) (With Levee)	Panels 110aP-110cP
Mojave River (Below Victorville) (Without Levee)	Panels 110dP-110fP
Mojave River (Below Victorville)	Panels 111P-124P
Mojave River (Upper Narrows)	Panels 125P-127P
North Fork Lytle Creek	Panels 128P-136P
Pinyon Creek	Panels 137P-139P
Quail Wash	Panels 140P-146P
Rathbun Creek	Panels 147P-153P
Reche Canyon Channel	Panels 154P-157P
Reche Canyon Channel (With Levee)	Panel 158aP
Reche Canyon Channel (Without Levee)	Panel 158bP
San Timoteo Creek	Panel 159P
Sand Creek	Panels 160P-162P
Santa Ana River	Panels 163P-177P
Soapmine Creek	Panels 178P-180P
Southwest Barstow Channel A	Panels 181P-186P
The Zanja	Panels 187P-190P

### **TABLE OF CONTENTS** – Volume 4

#### **EXHIBITS** - continued

Exhibit 1 – Flood Profiles (continued)

Twentynine Palms Channel Panels 191P-197P

Twentynine Palms Channel (Without Left

Levee Intact) Panel 197aP

Twin Creek Channel Panels 197bP -197cP

Twin Creek Channel (With Levees)

Warm Creek

Panel 197dP

Panels 198P-201P

Waterman Canyon
Wildwood Channel
Wilson Creek
Panels 202P-207P
Panels 208P-219P
Panels 220P-223P

Yermo Flood Channel Panels 220P-223P
Panels 224P-228P

Yucaipa Creek Panels 229P-241P
Yuca Creek (At Joshua Tree) Panels 242P-251P
Yuca Creek (At Yuca Valley) Panels 252P-255P

Exhibit 2 - Flood Insurance Rate Map Index

Flood Insurance Rate Map

