BASIN CHARACTERISTICS AND STREAMFLOW STATISTICS IN ARIZONA AS OF 1989

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations Report 91–4041

Prepared in cooperation with the
ARIZONA DEPARTMENT OF WATER RESOURCES and
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
inch (in.)	25.40	millimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
square mile (mi^2)	2.590	square kilometer
acre-foot (acre-ft)	0.001233	cubic hectometer
cubic foot per second (ft^3/s)	0.02832	cubic meter per second

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "*Sea Level Datum of 1929*".

BASIN CHARACTERISTICS AND STREAMFLOW STATISTICS IN ARIZONA AS OF 1989

By

J.M. Garrett and D.J. Gellenbeck

ABSTRACT

Streamflow and statistical data are given for 138 continuous-record streamflow-gaging stations and 176 partial-record gaging stations in Arizona. Data are presented for active and discontinued stations that have unregulated flow or partly regulated flow and at least 10 years of record. Data for continuous-record gaging stations include (1) annual peak discharges; (2) selected basin and climatic characteristics; and (3) statistical summaries of mean and annual discharges, magnitude and probability of annual low and high flows, flow duration, and magnitude and probability of annual peak flows. Mean annual discharge and mean monthly discharge are shown for each continuous-record gaging station. Data for partial-record gaging stations include (1) annual peak discharges, (2) basin and climatic characteristics, and (3) magnitude and probability of annual peak flows. Annual peak discharge is shown for each gaging station.

INTRODUCTION

To appraise the water resources of Arizona, definition of streamflow at selected locations is essential. To answer this need, the U.S. Geological Survey collects data at hundreds of continuous-record gaging stations and partial-record gaging stations throughout Arizona.

The primary purpose of this report is to expand and update an earlier report, "Statistical Summaries of Arizona Streamflow Data" (Anderson and White, 1979). This study was done in cooperation with the Arizona Department of Water Resources and the Flood Control District of Maricopa County. The report includes data from the files of the U.S. Geological Survey for continuous-record gaging stations and partial-record gaging stations through 1989. Streamflow data are presented in downstream order for 138 continuous-record gaging stations (fig. 1) and for 176 partial-record gaging stations (fig. 2). Data are included for active and discontined gaging stations that have at least 10 years of record (table 1).

Location, drainage area, and remarks are given for each streamflow-gaging station. Data for continuous-record gaging stations include (1) annual peak discharges; (2) selected basin and climatic characteristics; and (3) statistical summaries of mean and annual discharges, magnitude and probability of annual low and high flows, flow duration, and magnitude and probability of annual peak flows. Mean annual discharge and mean monthly discharge are shown for each continuous-record gaging station. Data for partial-record gaging stations include (1) annual peak discharges, (2) basin and climatic characteristics, and (3) magnitude and probability of annual peak flows. Annual peak discharge is shown for each station in the report.

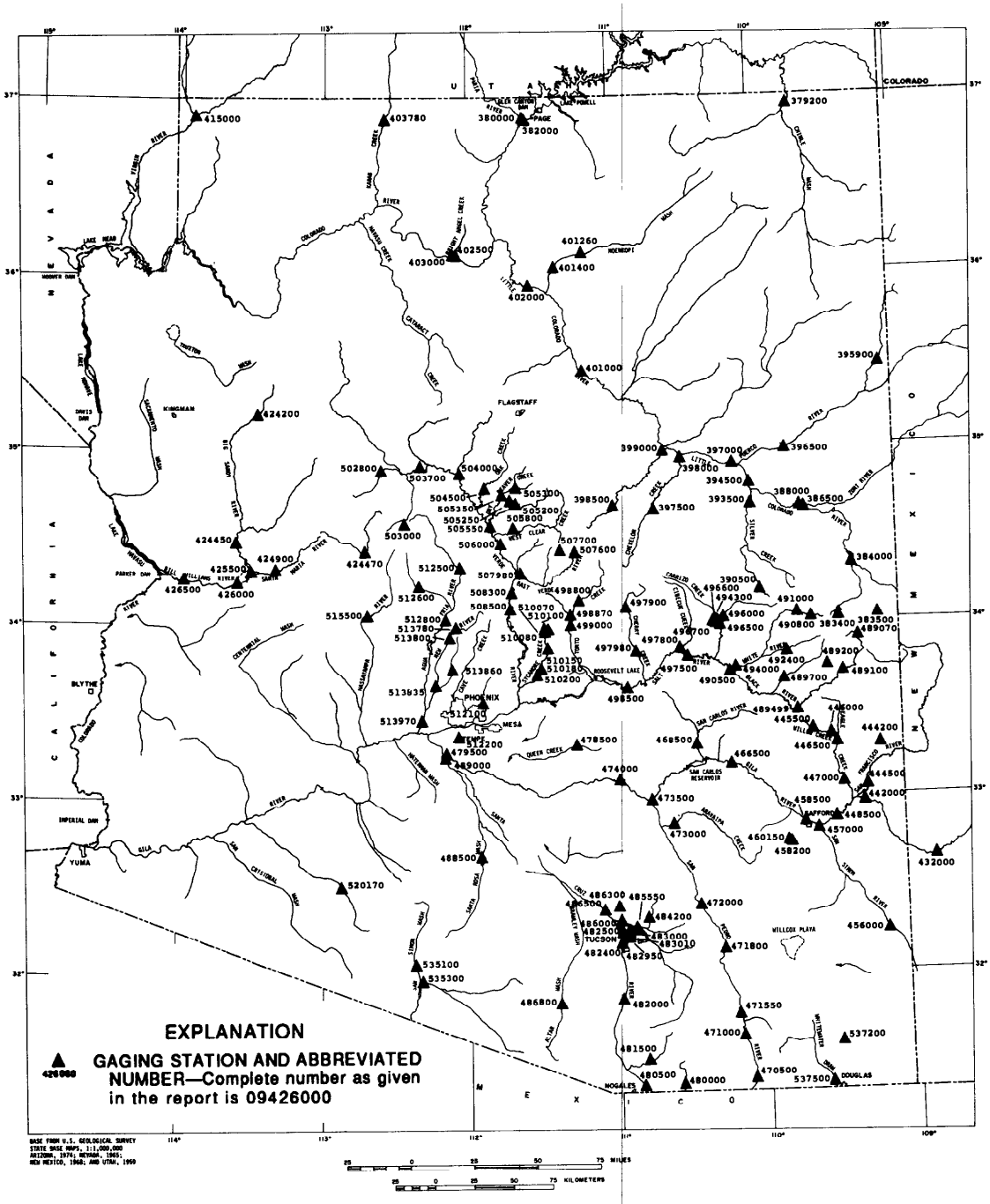


Figure 1.--Location of continuous-gaging stations.

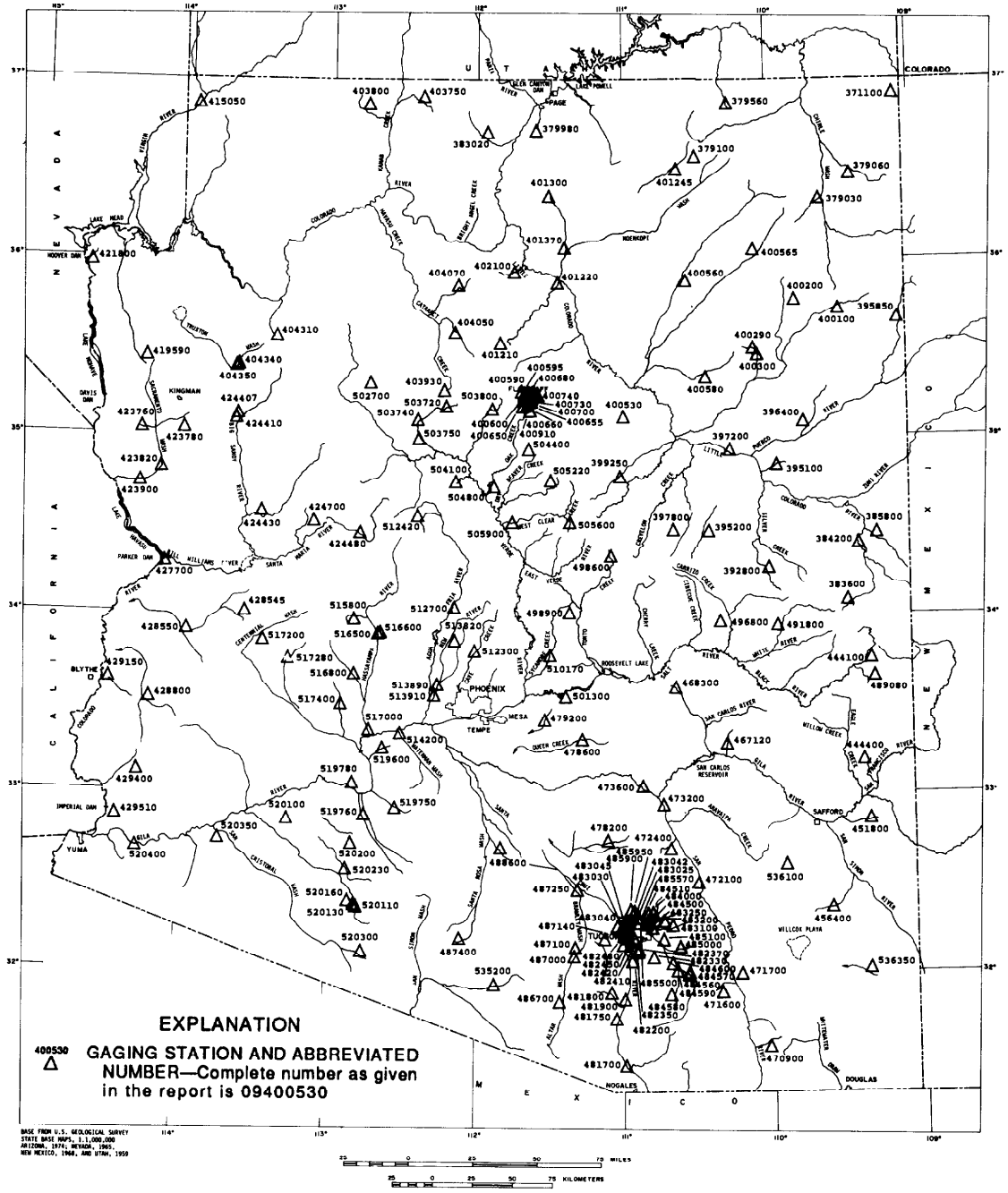
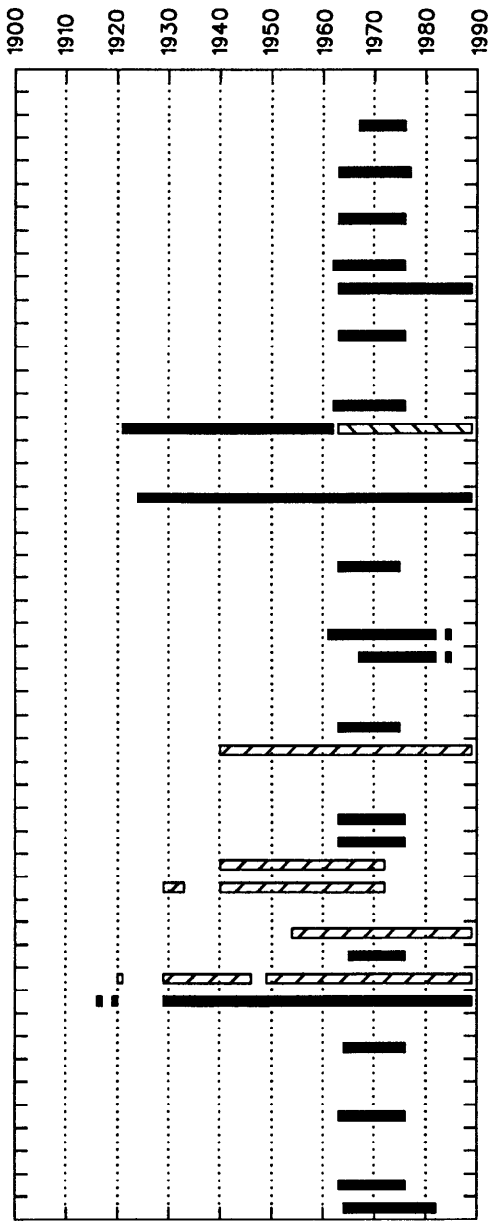


Figure 2.--Location of crest-stage gages.

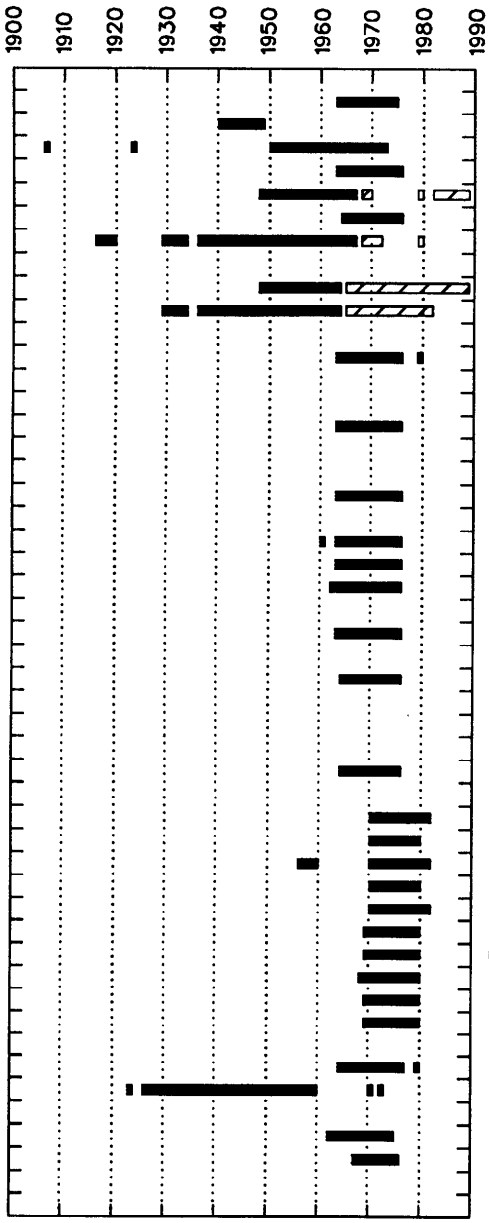
Table 1.--*Period of record for streamflow-gaging stations included in the compilation*

[UNREGULATED REGULATED PARTLY REGULATED]



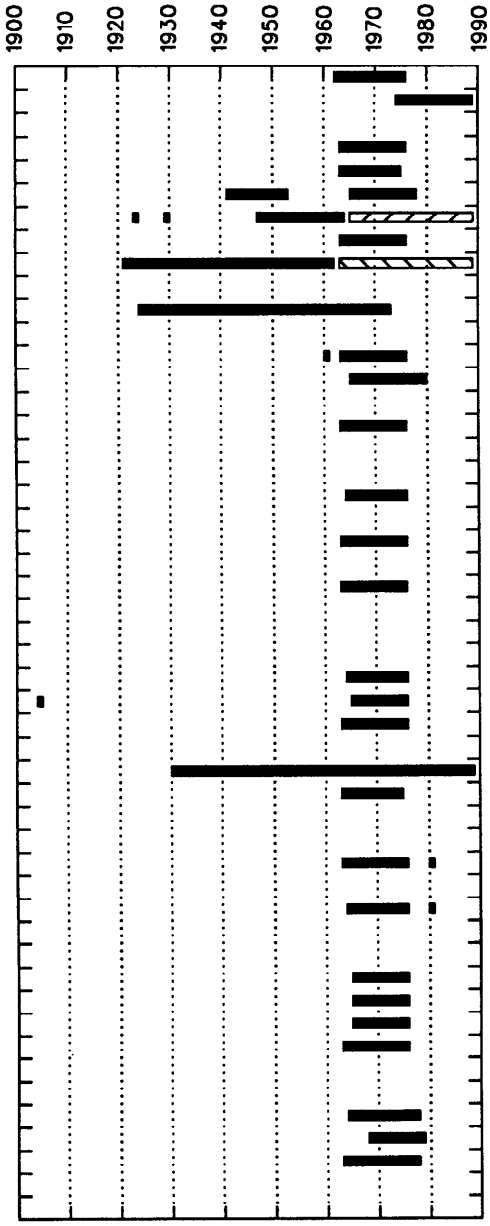
STATION NUMBER	GAGING STATION	PAGE NUMBER
	COLORADO RIVER BASIN	
	Colorado River:	
	SAN JUAN RIVER BASIN	
	San Juan River:	
09371100	Teec Nos Pos Wash near Teec Nos Pos	23
	Chinle Wash:	
09379030	Black Mountain Wash near Chinle	24
	Lukachukai Creek:	
09379060	Lukachukai Creek tributary near Lukachukai	25
	Laguna Creek:	
09379100	Long House Wash near Kayenta	26
09379200	Chinle Creek near Mexican Water	27
	Oljeto Wash:	
09379560	El Capitan Wash near Kayenta	30
	JACK BENCH WASH BASIN	
	Jack Bench Wash:	
09379980	Jack Bench Wash tributary near Page	31
09380000	Colorado River at Lees Ferry	32
	PARIA RIVER BASIN	
	Paria River:	
09382000	Paria River at Lees Ferry	36
	HOUSE ROCK WASH BASIN	
	House Rock Wash:	
09383020	House Rock Wash tributary near Marble Canyon	39
	LITTLE COLORADO RIVER BASIN	
	Little Colorado River:	
09383400	Little Colorado River at Greer	40
09383500	Nutrioso Creek above Nelson Reservoir near Springerville	43
	Hall Creek:	
09383600	Fish Creek near Eagar	46
09384000	Little Colorado River above Lyman Lake, near St Johns	47
	Lyman Reservoir:	
09384200	Lyman Reservoir tributary near St Johns	51
09385800	Little Colorado River tributary near St Johns	52
09386500	Little Colorado River above Zuni River near Hunt	53
09388000	Little Colorado River near Hunt	56
	Silver Creek:	
09390500	Show Low Creek near Lakeside	59
09392800	Long Lake tributary near Show Low	62
09393500	Silver Creek near Snowflake	63
09394500	Little Colorado River at Woodruff	66
	Carr Lake Draw:	
09395100	Carr Lake Draw tributary near Holbrook	69
	Washboard Creek:	
	Phoenix Park Wash (closed basin)	
09395200	Decker Wash near Snowflake	70
	Puerco River:	
	Black Creek:	
09395850	Black Creek tributary near Window Rock	71
09395900	Black Creek near Lupton	72

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



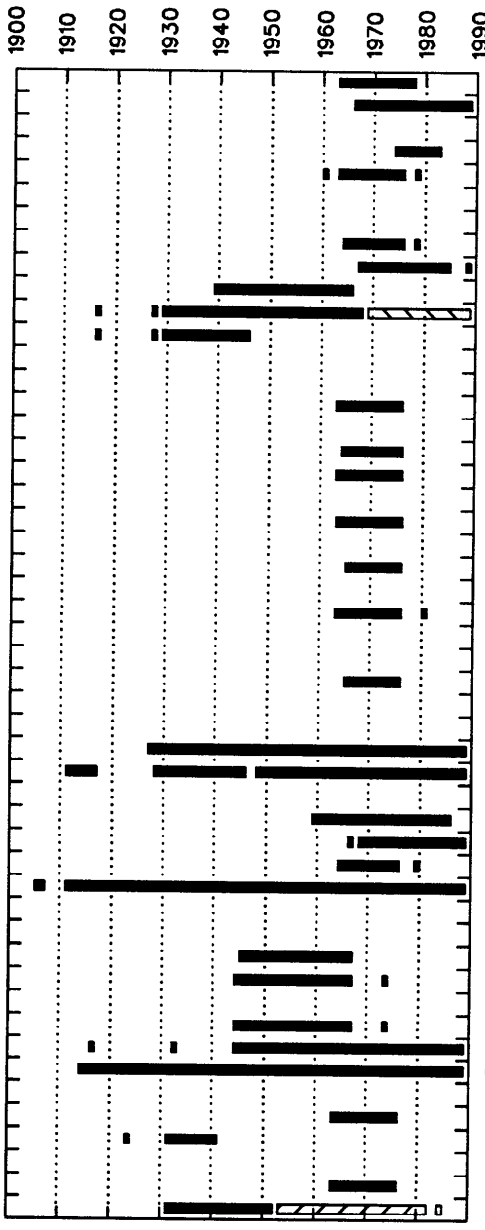
STATION NUMBER	GAGING STATION	PAGE NUMBER
	Colorado River--Continued	
	Little Colorado River Basin--Continued	
	Puerco River Basin--Continued	
	Dead Wash:	
09396400	Dead Wash tributary near Holbrook	75
09396500	Puerco River near Adamana	76
09397000	Little Colorado River at Holbrook	77
09397200	Penzance Wash near Joseph City	80
09397500	Chevelon Fork below Wildcat Canyon, near Winslow	81
09397800	Brookbank Canyon near Heber	84
09398000	Chevelon Creek near Winslow	85
	East Clear Creek (head of Clear Creek):	
09398500	Clear Creek below Willow Creek, near Winslow	88
09399000	Clear Creek near Winslow	91
	Jacks Canyon Creek (head of Salt Creek):	
09399250	Jacks Canyon tributary No.2 near Winslow	94
	Cottonwood Wash:	
	Ganado Wash (head of Pueblo Colorado Wash):	
09400100	Ganado Wash tributary near Ganado	95
	Pueblo Colorado Wash:	
	Steamboat Wash:	
09400200	Steamboat Wash tributary near Ganado	96
	Teshbito Wash:	
09400290	Teshbito Wash tributary near Holbrook	97
09400300	Teshbito Wash near Holbrook	98
09400530	Cow Canyon (meter Wash) near Winslow	99
	Oraibi Wash:	
09400560	Oraibi Wash triburary near Oraibi	100
	Polacca Wash:	
09400565	Polacca Wash tributrary near Chinle	101
	Corn Wash:	
	Whe Yol Da Sah Wash:	
	Dilkon Wash:	
09400580	Castle Butte Wash near Winslow	102
	Canyon Diablo:	
09400590	Rio De Flag at Hidden Hollow Rd at Flagstaff	103
09400595	Schultz Canyon at Flagstaff	104
09400600	Rio De Flag at Flagstaff	105
09400650	Sinclair Wash at Flagstaff	106
09400655	Rio De Flag at I40 at Flagstaff	107
09400660	Bow And Arrow Wash at Flagstaff	108
09400680	Switzer Canyon at Flagstaff	109
09400700	Switzer Canyon tributary at Flagstaff	110
09400730	Lockett Fanning Diversian at Flagstaff	111
09400740	Harenberg Wash at Flagstaff	112
	Walnut Creek:	
09400910	Fay Canyon near Flagstaff	113
09401000	Little Colorado River at Grond Falls	114
	Cedar Wash:	
09401210	Slate Mountain Wash near Flagstaff	117
09401220	Cedar Wash near Cameron	118
	Moenkapi Wash:	
	Shonto Wash:	

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



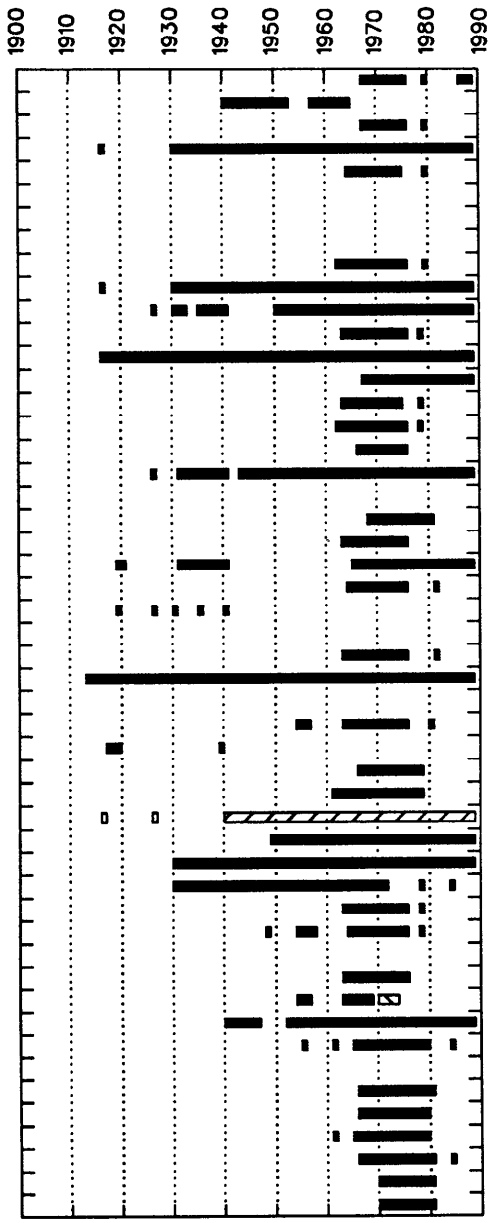
PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Colorado River--Continued	
		Little Colorado River Basin--Continued	
		Cedar Wash--Continued	
		Moenkopi Wash--Continued	
	09401245	Klethla Valley tributary near Kayenta	119
	09401260	Moenkopi Wash at Moenkopi	120
		Hamblin Wash:	
	09401300	Hamblin Wash tributary near Cedar Ridge	123
	09401370	Hamblin Wash tributary No.2 near Tuba City	124
	09401400	Moenkopi Wash near Tuba City	125
	09402000	Little Colorado River near Cameron	128
	09402100	Forest Boundory Wash near Cameron	132
	09402500	Colorado River near Grand Canyon	133
		BRIGHT ANGEL CREEK BASIN	
	09403000	Bright Angel Creek near Grand Canyon	136
		KANAB CREEK BASIN	
	09403750	Sagebrush Draw near Fredonia	140
	09403780	Kanab Creek near Fredonia	141
		Bitter Seeps Wash:	
	09403800	Bitter Seeps Wash tributary near Fredonia	144
		HAVASU CREEK BASIN	
		Cataract Creek (head of Havasu Creek):	
	09403930	West Cataract Creek near Williams	145
		Spring Valley Wash:	
	09404050	Spring Valley Wash tributary near Williams	146
		Red Horse Wash:	
	09404070	Little Red Horse Wash near Grand Canyon	147
		HUALAPAI WASH BASIN	
		Truxton Wash (head of Hualapai Wash):	
		Yampai Canyon:	
	09404310	Yampai Canyon tributary near Peach Springs	148
	09404340	Truxton Wash at Valentine	149
	09404350	Valentine Wash at Valentine	150
		VIRGIN RIVER BASIN	
	09415000	Virgin River at Littlefield	151
	09415050	Big Bend Wash tributary near Littlefield	155
		DETRITAL WASH BASIN	
		Detrital Wash:	
	09419590	Detrital Wash tributary near Chloride	156
		Eldorado Valley	
	09421800	Ringbolt Wash near Hoover Dam	157
		SACRAMENTO WASH BASIN	
		Sacramento Wash:	
	09423760	Little Meadow Creek near Oatman	158
	09423780	Walnut Creek near Kingman	159
	09423820	Sacramento Wash near Yucca	160
	09423900	Sacramento Wash tributary near Topock	161
		BILL WILLIAMS RIVER BASIN	
		Big Sandy River (head of Bill Williams River):	
	09424200	Willow Creek near Kingman	162
	09424407	McGarrys Wash near Kingman	165
	09424410	Big Sandy River tributary near Kingman	166
		Burro Creek:	
		Kaiser Spring Canyon:	

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



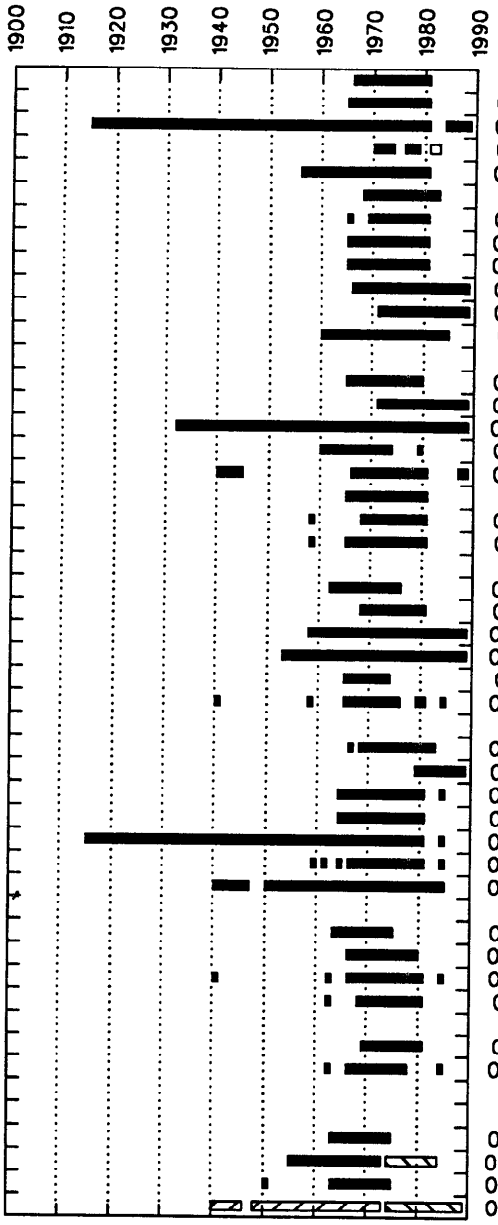
STATION NUMBER	GAGING STATION	PAGE NUMBER
	Colorado River--Continued	
	Big Sandy River--Continued	
	Burro Creek--Continued	
	Kaiser Spring Canyon--Continued	
09424430	Kaiser Spring Canyon tributary near Wikieup	167
09424450	Big Sandy River near Wikieup	168
	Kirkland Creek (head of Santa Maria River):	
09424470	Kirkland Creek near Kirkland	171
09424480	Ash Creek near Kirkland	172
	Santa Maria River:	
	Iron Spring Wash:	
09424700	Iron Spring Wash tributary near Bagdad	173
09424900	Santa Maria River near Bagdad	174
09425500	Santa Maria River near Alamo	177
09426000	Bill Williams River below Alamo Dam	180
09426500	Bill Williams River at Planet	183
	TRIBUTARIES AND DIVERSIONS BETWEEN PARKER DAM AND PALO VERDE DAM	
09427700	Monkeys Head Wash near Parker	186
	Cunningham Wash:	
09428545	Cunningham Wash tributary near Wenden	187
09428550	Bouse Wash tributary near Bouse	188
	Tyson Wash:	
09428800	Tyson Wash near Quartzsite	189
	TRIBUTARIES BETWEEN PALO VERDE DAM AND IMPERIAL DAM	
09429150	Creosote Wash near Ehrenberg	190
	Indian Wash:	
09429400	Indian Wash tributary near Yuma	191
	TRIBUTARIES BETWEEN IMPERIAL DAM AND GILA RIVER	
	Mittry Lake:	
09429510	Mittry Lake tributary near Yuma	192
	GILA RIVER BASIN	
	Gila River:	
09432000	Gila River below Blue Creek, near Virden NM	193
09442000	Gila River near Clifton	196
	San Francisco River:	
09444100	Campbell Blue Creek near Alpine	199
09444200	Blue River near Clifton	200
09444400	Chase Creek near Clifton	203
09444500	San Francisco River at Clifton	204
	Eagle Creek:	
	Willow Creek:	
09445500	Willow Creek near Point of Pines near Morenci	208
09446000	Willow Creek near Double Circle Ranch near Morenci	211
09446500	Eagle Creek near Double Circle Rnch near Morenci	214
09447000	Eagle Creek above Pumping Plant near Morenci	217
09448500	Gila River at Head of Safford Valley near Solomon	220
	Tollgate Wash (head of Yuma Wash):	
09451800	Tollgate Wash tributary near Clifton	224
09456000	San Simon River near San Simon	225
	Parks Lake Basin:	
09456400	Gold Gulch near Bowie	226
09457000	San Simon River near Solomon	227

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



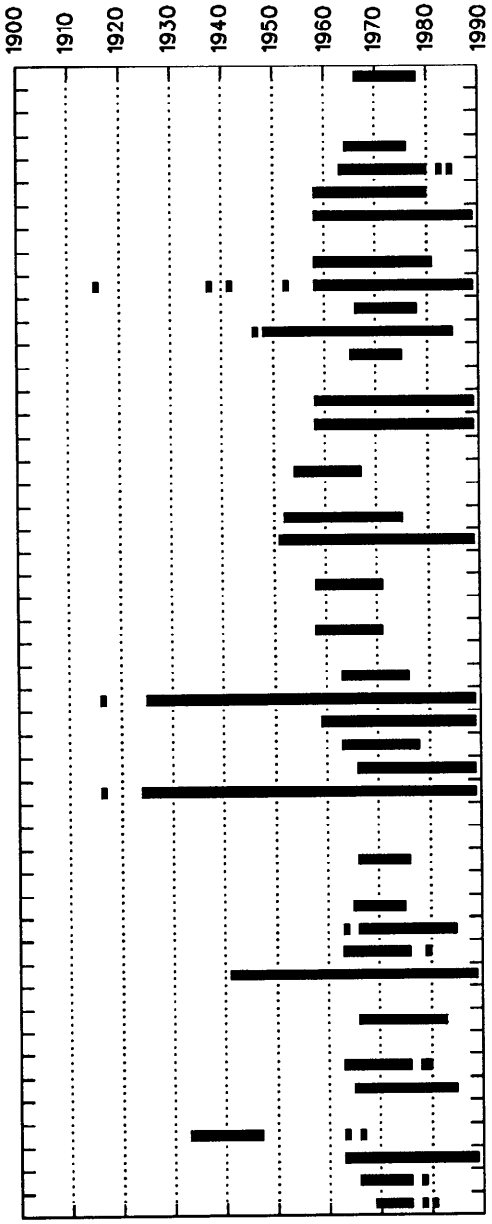
PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Colorado River--Continued	
		Gila River Basin--Continued	
	09458200	Deadman Creek near Safford	230
	09458500	Gila River at Safford	233
	09460150	Frye Creek near Thatcher	236
	09466500	Gila River at Calva	237
	09467120	Salt Creek near Peridot	240
		San Carlos River:	
		Sycamore Creek:	
		Sevenmile Wash:	
	09468300	Sevenmile Wash tributary near Globe	241
	09468500	San Carlos River near Peridot	242
	09470500	San Pedro River at Palominas	245
	09470900	San Pedro River tributary near Bisbee	248
	09471000	San Pedro River at Charleston	249
	09471550	San Pedro River near Tombstone	253
	09471600	Canary Wash near Benson	256
	09471700	Fenner Wash near Benson	257
	09471800	San Pedro River near Benson	258
	09472000	San Pedro River near Redington	261
		Peck Canyon:	
	09472100	Peck Canyon tributary near Redington	264
	09472400	Mammoth Wash near Mammoth	265
	09473000	Aravaipa Creek near Mammoth	266
	09473200	Green Lantern Wash near Winkelman	269
	09473500	San Pedro River at Winkelman	270
	09473600	Tom O'shanter Wash near Hayden	273
	09474000	Gila River at Kelvin	274
		Mcclellan Wash:	
	09478200	Durham Wash near Florence	277
	09478500	Queen Creek at Whitlow Damsite near Superior	278
	09478600	Queen Creek tributary No.3 at Whitlow Dam	281
	09479200	Queen Creek tributary at Apache Junction	282
	09479500	Gila River near Laveen	283
	09480000	Santa Cruz River near Lochiel	286
	09480500	Santa Cruz River near Nogales	290
	09481500	Sonoita Creek near Patagonia	293
	09481700	Calabasas Canyon near Nogales	296
	09481750	Sopori Wash at Amado	297
		Demetrie Wash:	
	09481800	Demetrie Wash tributary near Continental	298
	09481900	Ocotillo Wash near Continental	299
	09482000	Santa Cruz River at Continental	300
	09482200	Flato Wash near Sahuarita	303
		South Fork Airport Wash:	
	09482330	Pumping Wash near Vail	304
	09482350	South Fork Airport Wash near Tucson	305
	09482370	North Fork Airport Wash near Tucson	306
	09482400	Airport Wash at Tucson	307
	09482410	Rodeo Wash at Tucson	310
	09482420	Julian Wash at Tucson	311

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



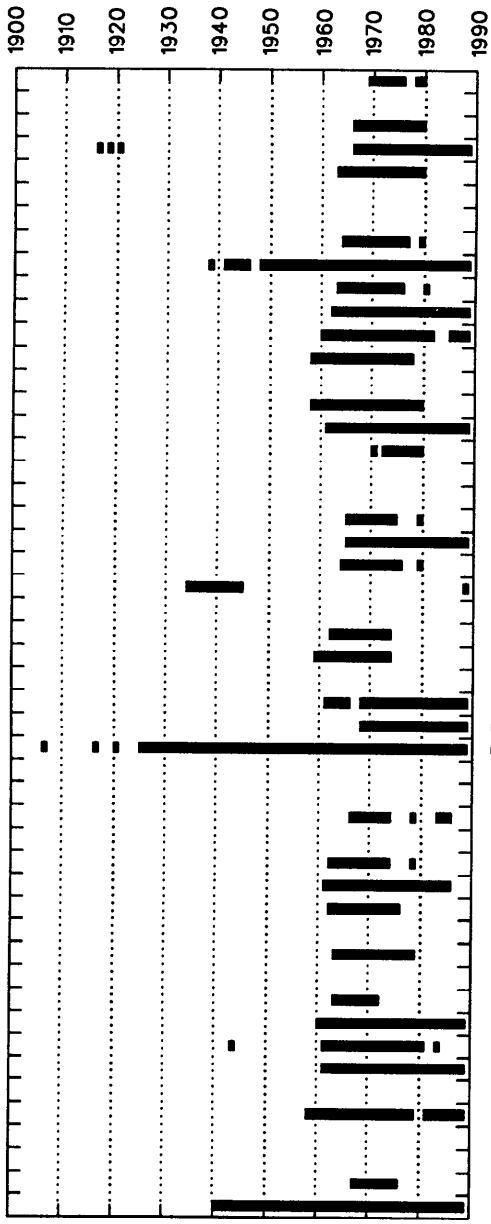
PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Colorado River--Continued	
		Gila River Basin--Continued	
		Santa Cruz River--Continued	
	09482450	West Branch Santa Cruz River at Tucson	312
	09482480	Big Wash at Tucson	313
	09482500	Santa Cruz River at Tucson	314
	09482950	Railroad Wash at Tucson	317
	09483000	Tucson Arroyo at Vine Ave at Tucson	318
	09483010	High School Wash at Tucson	321
	09483025	Silvercroft Wash at Tucson	324
	09483030	Anklam Wash at Tucson	325
	09483040	West Speedway Wash near Tucson	326
	09483042	Cemetery Wash at Tucson	327
	09483045	Flowing Wells Wash at Tucson	328
	09483100	Tanque Verde Creek near Tucson	329
		Agua Caliente Wash:	
	09483200	Agua Caliente Wash tributary near Tucson	332
	09483250	Rob Wash at Tucson	333
	09484000	Sabino Creek near Tucson	334
	09484200	Bear Creek near Tucson	337
	09484500	Tanque Verde Creek at Tucson	340
	09484510	Ventana Canyon Wash near Tucson	341
	09484560	Cienega Creek near Pantano	342
	09484570	Mescal Arroyo near Pantano	343
		Pantano Wash:	
	09484580	Barrel Canyon near Sonoita	344
	09484590	Davidson Canyon Wash near Vail	345
	09484600	Pantano Wash near Vail	346
	09485000	Rincon Creek near Tucson	349
	09485100	Saguaro Corners Wash near Tucson	352
	09485500	Pantano Wash near Tucson	353
		Rillito Creek:	
	09485550	Arcadia Wash at Tucson	354
	09485570	Alamo Wash at Tucson	355
	09485900	Pima Wash near Tucson	356
	09485950	Geronimo Wash near Tucson	357
	09486000	Rillito Creek near Tucson	358
	09486300	Canada Del Oro near Tucson	361
	09486500	Santa Cruz River at Cortaro	364
		Altar Wash (head of Los Robles Wash):	
	09486700	Chiltepines Wash near Sasabe	367
	09486800	Altar Wash near Three Points	368
	09487000	Brawley Wash near Three Points	369
	09487100	Little Brawley Wash near Three Points	370
		Brawley Wash tributary:	
	09487140	San Joaquin Wash near Tucson	371
	09487250	Los Robles Wash near Marana	372
		Santa Rosa Wash:	
		Quijotoa Wash:	
	09487400	Quijotoa Wash tributary near Quijotoa	373
	09488500	Santa Rosa Wash near Vaiva Vo	374
	09488600	Silver Reef Wash near Casa Grande	375
	09489000	Santa Cruz River near Laveen	376

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



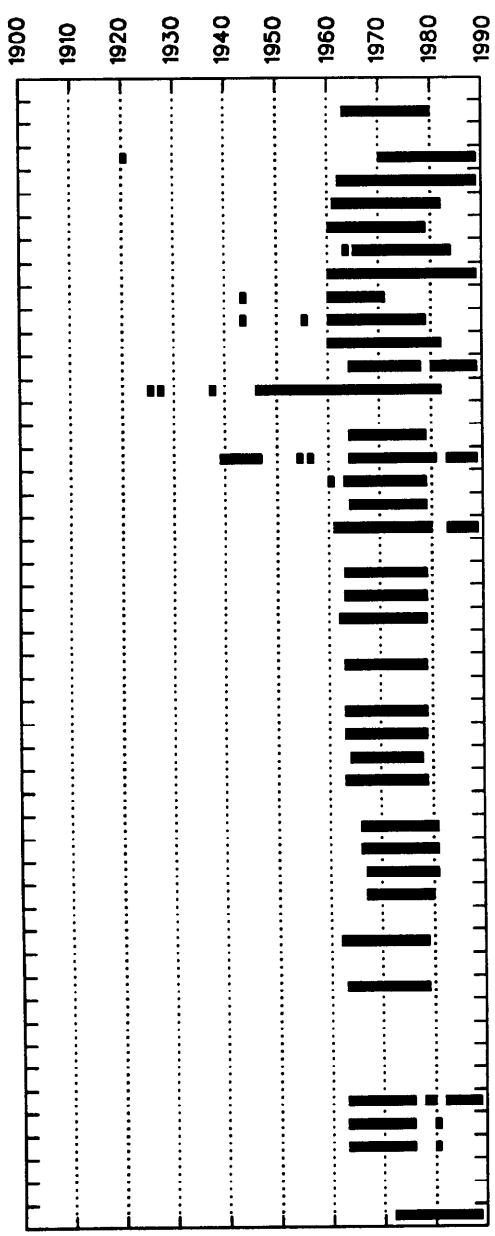
STATION NUMBER	GAGING STATION	PAGE NUMBER
	Colorado River--Continued	
	Gila River--Continued	
09489070	North Fork of East Fork Black River near Alpine	379
	Black River:	
	Beaver Creek:	
09489080	Hannagan Creek near Hannagan Meadow	382
09489100	Black River near Maverick	383
09489200	Pacheta Creek at Maverick	386
09489499	Black River above Willow Creek Diversion, near Point of Pines	389
09489700	Big Bonito Creek near Fort Apache	392
09490500	Black River near Fort Apache	395
09490800	North Fork White River near Greer	398
09491000	North Fork White River near McNary	401
09491800	North Fork White River tributary near Whiteriver	404
09492400	East Fork White River near Fort Apache	405
09494000	White River near Fort Apache	408
	Salt River:	
09494300	Carrizo Creek above Corduroy Creek, near Show Low	411
09496000	Corduroy Creek near mouth near Show Low	414
09496500	Carrizo Creek near Show Low	417
	Carrizo Creek tributary:	
09496600	Cibecue 1 tributary Carrizo Creek, near Show Low	420
09496700	Cibecue 2 tributary Carrizo Creek, near Show Low	423
09496800	Carrizo Creek tributary near Show Low	426
09497500	Salt River near Chrysotile	427
09497800	Cibecue Creek near Chrysotile	430
09497900	Cherry Creek near Young	433
09497980	Cherry Creek near Globe	436
09498500	Salt River near Roosevelt	439
	Tonto Creek:	
	Christopher Creek:	
09498600	Christopher Creek tributary near Kohl's Ranch	443
09498800	Tonto Creek near Gisela	444
09498870	Rye Creek near Gisela	447
09498900	Gold Creek near Payson	450
09499000	Tonto Creek above Gun Creek near Roosevelt	451
	Tortilla Creek:	
09501300	Tortilla Creek at Tortilla Flat	454
	Big Chino Wash (head of Verde Valley):	
09502700	Crookton Wash near Seligman	455
09502800	Williamson Valley Wash near Paulden	456
	Verde River:	
09503000	Granite Creek near Prescott	459
09503700	Verde River near Paulden	462
09503720	Hell Canyon near Williams	465
09503740	Hell Canyon tributary Near Ash Fork	466

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



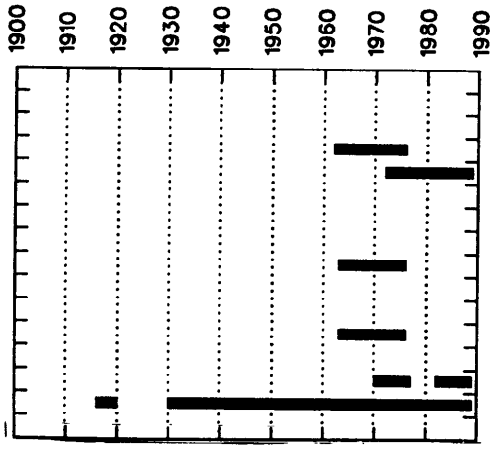
PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Colorado River--Continued	
		Gila River Basin--Continued	
		Salt River--Continued	
		Verde River--Continued	
		Limestone Canyon near Paulden	467
		Sycamore Creek:	
	09503750	Volunteer Wash near Bellemont	468
	09503800	Verde River near Clarkdale	469
	09504000	Hull Canyon near Jerome	472
	09504100	Oak Creek:	
		Munds Canyon:	
	09504400	Munds Canyon tributary near Sedona	473
	09504500	Oak Creek near Cornville	474
	09504800	Oak Creek tributary near Cornville	478
	09505200	Wet Beaver Creek near Rimrock	479
	09505220	Rocky Gulch near Rimrock	482
	09505250	Red Tank Draw near Rimrock	483
		Dry Beaver Creek:	
	09505300	Rattlesnake Canyon near Rimrock	486
	09505350	Dry Beaver Creek near Rimrock	489
	09505550	Verde River below Camp Verde	492
		Clover Creek (head of West Clear Creek):	
		Forty Four Canyon:	
	09505600	Dirty Neck Canyon near Clints Well	493
	09505800	West Clear Creek near Camp Verde	494
	09505900	Cottonwood Wash near Camp Verde	497
	09506000	Verde River near Camp Verde	498
		East Verde River:	
	09507600	East Verde River near Pine	501
	09507700	Webber Creek abover West Fork Webber Creek, near Pine	504
	09507980	East Verde River near Childs	507
	09508300	Wet Bottom Creek near Childs	510
	09508500	Verde River below Tangle Creek, above Horseshoe Dam	514
		Verde River tributary:	
	09510070	West Fork Sycamore Creek above McFarland Canyon, near Sunflower	518
	09510080	West Fork Sycamore Creek near Sunflower	521
	09510100	East Fork Sycamore Creek near Sunflower	524
	09510150	Sycamore Creek near Sunflower	527
		Pine Creek:	
	09510170	Camp Creek near Sunflower	530
		Mesquite Wash:	
	09510180	Rock Creek near Sunflower	531
	09510200	Sycamore Creek near Fort McDowell	532
	09512100	Indian Bend Wash at Scottsdale	535
	09512200	Salt River tributary in South Mountain Park, Phoenix	536
	09512300	Cave Creek near Cave Creek	540
		Agua Fria River:	
		Lynx Creek:	
	09512420	Lynx Creek tributary near Prescott	541
	09512500	Agua Fria River near Mayer	542

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Colorado River--Continued	
		Gila River Basin--Continued	
		Agua Fria River--Continued	
	09512600	Turkey Creek near Cleator	545
	09512700	Agua Fria River tributary No.2 near Rock Springs	548
	09512800	Agua Fria River near Rock Springs	549
	09513780	New River near Rock Springs	552
	09513800	New River at New River	555
	09513820	Deadman Wash near New River	558
	09513835	New River at Bell Road, near Peoria	559
	09513860	Skunk Creek near Phoenix	562
	09513890	New River at Peoria	565
	09513910	New River near Glendale	566
	09513970	Agua Fria River at Avondale	567
	09514200	Waterman Wash near Buckeye	570
	09515500	Hassayampa River at Box damsite near Wickenburg	571
		Sols Wash:	
	09515800	Hartman Wash near Wickenburg	574
	09516500	Hassayampa River near Morristown	575
	09516600	Ox Wash near Morristown	576
	09516800	Jack Rabbit Wash near Tonopah	577
	09517000	Hassayampa River near Arlington	578
		Centennial Wash:	
	09517200	Centennial Wash tributary near Wenden	579
	09517280	Tiger Wash near Aguila	580
	09517400	Winters Wash near Tonopah	581
		Rainbow Wash:	
	09519600	Rainbow Wash tributary near Buckeye	582
		Sand Tank Wash:	
	09519750	Bender Wash near Gila Bend	583
	09519760	Souceda Wash near Gila Bend	584
	09519780	Windmill Wash near Gila Bend	585
	09520100	Military Wash near Sentinel	586
		Rio Cornez (head of Ten Mile Wash):	
	09520110	Hot Shot Arroyo near Ajo	587
	09520130	Darby Arroyo near Ajo	588
	09520160	Gibson Arroyo at Ajo	589
	09520170	Rio Cornez near Ajo	590
		Ten Mile Wash tributary:	
	09520200	Black Gap Wash near Ajo	593
		Midway Wash:	
	09520230	Crater Range Wash near Ajo	594
		San Cristobal Wash	
		Growler Wash:	
		Cheriani Wash:	
		Alamo Wash:	
	09520300	Alamo Wash tributary near Ajo	595
	09520350	Mohawk Pass Wash at Mohawk	596
	09520400	Ligurta Wash at Ligurta	597
		RIO SONOYTA BASIN	
		SAN SIMON WASH BASIN	
	09535100	San Simon Wash near Pisinimo	598

Table 1.--*Period of record for streamflow-gaging stations included in the compilation*--Continued



PERIOD OF RECORD	STATION NUMBER	GAGING STATION	PAGE NUMBER
		Rio Sonoyta--Continued	
		San Simon Wash Basin--Continued	
		Vamori Wash:	
		Gu Oidak Wash:	
		Sells Wash:	
	09535200	Little Tucson Wash at Sells	601
	09535300	Vamori Wash at Kom Vo	602
		SULPHUR SPRING VALLEY	
		WILLCOX PLAYA BASIN (closed basin)	
		Pitchfork Canyon:	
	09536100	Pitchfork Canyon tributary near Fort Grant	605
		Pinery Creek:	
		Bonita Canyon:	
	09536350	Surprise Canyon near Dos Cabezas	606
		WHITEWATER DRAW BASIN	
	09537200	Leslie Creek near McNeal	607
	09537500	Whitewater Draw near Douglas	610

STREAMFLOW-GAGING STATIONS

Gaging stations provide data that can be used in an appraisal of the State's surface-water resources. The U.S. Geological Survey began collecting streamflow data in Arizona in 1888. Since 1912, the Geological Survey has conducted a data-collection program in cooperation with the State of Arizona and has operated continuous-record gaging stations and partial-record gaging stations in cooperation with Federal, State, and local agencies. Gaging stations are installed at sites where streamflow data are required for management of water resources. Because of the similarities of natural streamflow among streams, the information collected at gaging stations that have natural flow are useful at the gaged site and at nearby ungaged sites.

Continuous-Record Gaging Stations

At continuous-record gaging stations, instruments are installed to sense and record the water-surface elevation in the stream. Using discharge measurements made at various stages and other observations of flow, a stage-discharge rating is determined for the range of streamflow measurements. This rating enables mean daily discharge to be calculated for the defined time-weighted range in the stage of the stream.

Partial-Record Gaging Stations

Partial-record gaging stations can be continuous-record gaging stations for which only the annual maximum discharge is computed or crest-stage gaging stations or a combination of the two. A crest-stage gage records the maximum peak stage. The peak discharge for each maximum recorded stage is determined from a stage-discharge rating determined for each site. Peak-flow data generally are collected for use in the design of safe and economical bridges and culverts.

The U.S. Geological Survey operated a statewide network of partial-record gaging stations during 1963-75 in a cooperative program with the Arizona Department of Transportation and the Federal Highway Administration. Data collected in this program also were used in a statewide flood-frequency analysis (Roeske, 1978).

STREAMFLOW RECORDS AND BASIN CHARACTERISTICS

A station description, annual peak discharges, and basin and climatic characteristics are provided for each gaging station in this report. The station description includes location, drainage area (the area of a stream basin upstream from the gaging station), and remarks. The location and drainage area generally are obtained from 1:24,000 topographic maps. Annual peak discharge is the maximum instantaneous discharge that occurs in a water year (October 1 through September 30). The annual peak

discharges also include historical data (peaks that occurred before, during, or after the systematic records), paleoflood data (flood data that uses geologic evidence to estimate discharges), date of the discharge, and discharge codes.

Basin and climatic characteristics were calculated for streamflow-gaging stations with unregulated or partly regulated flow (flow affected to an unknown degree by regulation or diversion). The characteristics include main channel slope, stream length, mean basin elevation, forested area, soil index, mean annual precipitation, and rainfall intensities. These characteristics were determined using the following criteria (U.S. Geological Survey, 1977).

Main-channel slope, in feet per mile, is an index of the slope of the main channel and is computed from the difference in streambed elevation at points that are 10 and 85 percent of the distance along the main channel from the gaging station to the basin divide. The main-channel slope is computed by the equation:

$$S_c = \frac{(E_{85} - E_{10})}{0.75L_c},$$

where

S_c = main-channel slope, in feet per mile;

E_{85} = elevation at 85-percent point of main-channel distance, in feet;

E_{10} = elevation at 10-percent point of main channel distance, in feet; and

L_c = length of main channel from the gage to the basin divide, in miles.

Stream length, in miles, is the length of the main channel, L_c, from the gaging station to the basin divide. The main channel is chosen at each bifurcation by following the fork that has the largest drainage area.

Mean basin elevation, in feet, is the average distance above sea level of representative points in the basin. Mean basin elevation is computed as the arithmetic average of the elevation of 50 to 100 points at the intersections of equally spaced grid lines superimposed on a map of the basin.

Forested area, in percent, is the portion of drainage area shown as forested on topographic maps. Forested area is computed as the ratio of the area shown as covered by forests to the total drainage times 100 percent. Areas were measured by planimeter.

Soil index, in inches, is a numerical index proportional to the long-term infiltration rate. The soil index was calculated by applying a grid system to a soils map (U.S. Soil Conservation Service, 1969) that had the drainage basin delineated on the map.

Mean annual precipitation, in inches, is the normal annual precipitation that falls on the drainage basin. Mean annual precipitation is determined by outlining the drainage basin on a normal annual precipitation map (University of Arizona, 1965), summing the products of the planimetered subareas and their midrange precipitation value, and dividing by total area.

Rainfall intensities, in inches for a 24-hour storm period with recurrence intervals of 2 years and 50 years, are determined by outlining the drainage basin on a precipitation map (U.S. Weather Bureau, 1967), summing the products of the planimetered subareas and their midrange precipitation value, and dividing by total area.

STATISTICAL SUMMARIES

Statistical summaries of streamflow data computed from daily mean values of flow and instantaneous peak flows are presented for the continuous-record gaging stations. Only recurrence intervals for instantaneous peak flows are presented for the partial-record gaging stations. The statistical summaries for equivalent periods of record contain analyses of mean monthly and annual discharges, magnitude and probability of annual low and high flows, magnitude and probability of instantaneous high flows (flood frequency), and percentage of time that a given daily mean flow was equaled or exceeded. Records from two or more sites are combined into one equivalent record. Nonequivalent record normally means that the amount of low flow was different because of recent upstream diversions, increased infiltration between the old gage site and present gage site, and increased spring flow between past and present gage sites. Normally the high flows and annual peak discharges are considered equivalent. Recurrence intervals equal to more than twice the period of record are flagged as unreliable. All recurrence intervals may be flagged for some stations where flood-frequency relations are unreliable. Except for magnitude and probability of instantaneous peak flow, values of the streamflow statistics are computed from data collected during a water year that had a daily mean flow value for each day of the year. Streamflow statistics are calculated on the basis of a water year, which begins on October 1 and ends on September 30; however, the magnitude and probability of annual low-flow statistics are calculated on the basis of a climatic year, which begins on April 1 and ends on March 31.

Low-flow magnitude and probability were calculated for 1-, 3-, 7-, 14-, 30-, 60-, 90-, 120-, and 183-day periods. High-flow magnitude

and probability were calculated for 1-, 3-, 7-, 15-, 30-, 60-, and 90-day periods. These statistics indicate the nonexceedance probability for low flows and exceedance probability for high flows that have 2-, 5-, 10-, 25-, 50-, and 100-year recurrence intervals. Discharges in the low-flow magnitude and probability were adjusted graphically when computer-generated values in the 50- and 100-year recurrence intervals were unacceptable.

Instantaneous peak-flow magnitudes were calculated from observed peak-flow record using the log-Pearson Type III frequency distribution for the 2-, 5-, 10-, 25-, 50-, and 100-year recurrence intervals. The analyses followed the guidelines of the U.S. Water Resources Council (1981b), and historical flood information, no-flow years, and outliers were treated according to the guidelines. Statistics show stationarity in peak-flow records for Arizona (H.W. Hjalmarson, hydrologist, U.S. Geological Survey, oral commun., 1989). The probability of a flood exceeding a given discharge is the same in the last year of record as it was in the first.

Flood-frequency relations are shown for unregulated or partly regulated streamflow stations, that is, stations at which flow is affected to an unknown degree by regulation or diversion. Since 1963, the flow of the Colorado River has been regulated by Lake Powell; since 1929, flow of the Gila River below Coolidge Dam has been regulated largely by major reservoirs on the Gila River and several of its principal tributaries. Peak-flow magnitudes for station data prior to regulation are published in Anderson and White (1979). Relation of discharge to miles, below Coolidge Dam adjusted to remove the regulated condition prior to 1975 below the dam on the Gila River for selected recurrence intervals, is published in Roeske (1978). Several methods for estimating magnitude and frequency of floods in Arizona were described by Patterson and Somers (1966), Roeske (1978), Eychaner (1984), and Hill and others (1988).

Duration of daily mean discharge is described in terms of percentage of time a given daily mean discharge was equaled or exceeded. Discharges were calculated for the 1, 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 95, 98, 99, 99.5, and 99.9 percentiles.

DISCHARGE

Annual peak discharge, mean annual discharge, and mean monthly discharge are shown for all continuous-record gaging stations. Annual peak discharge is shown for partial-record gaging stations. Cumulative departure from the mean is shown for selected long-term gaging stations or hydrologic bench-mark stations.

Annual means are shown for some stations for years in which daily values are not available but monthly or annual means have been estimated. The median value line is shown when applicable. Median discharge is published when it is consistently (about two-thirds of the time) less than 90 percent of the mean (Novak, 1985). Mean monthly discharge is based on period of equivalent record; maximum, mean, and minimum mean monthly discharges by months are shown. Periods when monthly means were estimated are not included. The trend of the lines on the graphs showing accumulated departures from the annual mean for the period of record indicates wet and

dry periods; downward trends indicate below-normal means, and upward trends indicate above-normal means.

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STREAMFLOW DATA

Abbreviations used in the table of annual peak discharges are given below:

MD	Maximum daily average.
ES	Discharge is an estimate.
LT	Discharge is less than indicated value.
UR	Discharge is affected to unknown degree by regulation or diversion.
KR	Discharge is affected by regulation or diversion.
HP	Discharge is an isolated historic peak; not part of the systematic record.
PF	Discharge is a paleoflood peak; not part of the systematic record.
C	All or part of the record is affected by urbanization.
DF	Discharge is affected by dam failure.

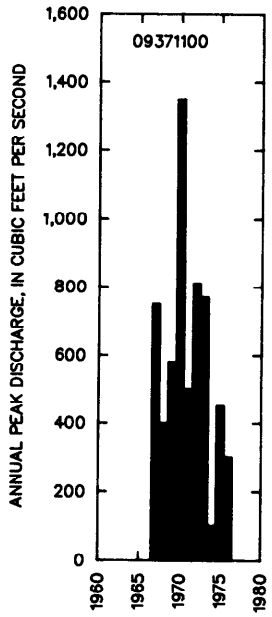
09371100 Teec Nos Pos Wash near Teec Nos Pos, AZ

LOCATION.--Lat 36°55'58", long 109°06'35", in NE¼ sec.27, T.41 N., R.30 E., Apache County, Hydrologic Unit 14080201, at U.S. Highway 160 (renumbered), 1.5 mi northwest of Teec Nos Pos Trading Post.

DRAINAGE AREA.--16.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	00-00-67	750	
1968	08-01-68	400	ES
1969	07-18-69	580	
1970	09-12-70	1,350	
1971	08-00-71	500	
1972	09-06-72	810	
1973	10-19-72	770	
1974	07-22-74	100	
1975	09-00-75	450	
1976	00-00-76	300	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
557	841	1,050	1,320	1,530	1,760

WEIGHTED SKEW (LOGS)= 0.03
MEAN (LOGS)= 2.75
STANDARD DEV. (LOGS)= 0.21

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
411	11.2	7,600	80.0	2.0	16.5	1.4	2.9

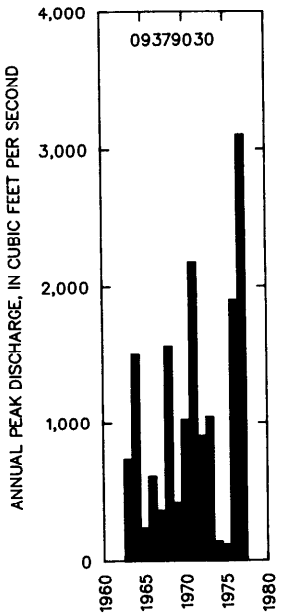
09379030 BLACK MOUNTAIN WASH NEAR CHINLE, AZ

LOCATION.--Lat 36°20'00", long 109°37'25", Apache County, Hydrologic Unit 14080204, at State Highway 63, 1 mi south of Many Farms, and 13 mi north of Chinle.

DRAINAGE AREA.--80.7 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-06-63	737
1964	08-13-64	1,500
1965	08-02-65	238
1966	07-31-66	610
1967	08-00-67	360
1968	08-01-68	1,560
1969	08-03-69	422
1970	08-20-70	1,020
1971	08-00-71	2,180
1972	08-00-72	900
1973	10-19-72	1,040
1974	07-00-74	140
1975	08-20-75	110
1976	00-00-76	1,900
1977	08-17-77	3,100



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-77

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
844	1,650	2,320	3,280	4,090	4,970

WEIGHTED SKEW (LOGS)= -0.18
MEAN (LOGS)= 2.92
STANDARD DEV. (LOGS)= 0.36

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.2	14.4	5,920	2.1	3.0	10.9	1.3	2.7

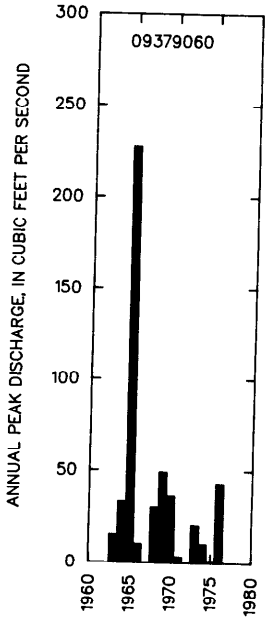
09379060 LUKACHUKAI CREEK TRIBUTARY NEAR LUKACHUKAI, AZ

LOCATION.--Lat 36°28'10", long 109°24'20", Apache County, Hydrologic Unit 14080204, at Navajo Highway 12, 6.8 mi southeast of Round Rock, and 10 mi northwest of Lukachukai.

DRAINAGE AREA.--1.37 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-31-63	15	
1964	07-31-64	33	
1965	01-06-65	227	
1966	07-31-66	10	ES
1967	00-00-67	0	
1968	08-00-68	30	
1969	07-18-69	49	
1970	10-04-69	36	
1971	08-00-71	3.0	ES
1972	00-00-72	0	
1973	00-00-73	20	
1974	02-21-74	10	
1975	00-00-75	1.0	ES
1976	00-00-76	43	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
17.9	46.8	79.5	143	210	301

WEIGHTED SKEW	(LOGS)=	0.26
MEAN	(LOGS)=	1.27
STANDARD DEV.	(LOGS)=	0.48

† Reliability of values in column is uncertain, and potential errors are large.

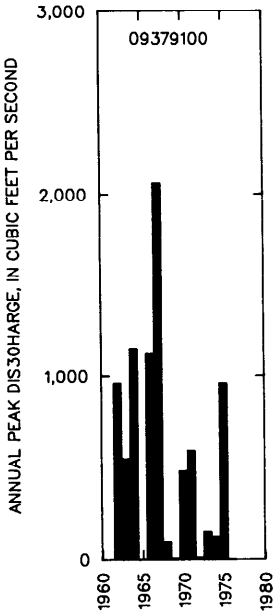
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
72.2	2.4	5,820	0.0	3.0	9.8	1.2	2.63

09379100 LONG HOUSE WASH NEAR KAYENTA, AZ

LOCATION.--Lat 36°34'02", long 110°29'17", Navajo County, Hydrologic Unit 15020018, at U.S. Highway 160, 17 mi southwest of Kayenta.

DRAINAGE AREA.--1.38 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	960	
1963	08-06-63	548	
1964	07-31-64	1,150	
1965	00-00-65	0	
1966	08-31-66	1,120	
1967	07-30-67	2,060	
1968	08-00-68	96	
1969	08-03-69	5.0	ES
1970	09-05-70	480	
1971	08-00-71	590	
1972	00-00-72	10	ES
1973	10-19-72	150	
1974	07-00-74	123	
1975	09-08-75	960	
1976	00-00-76	1.0	ES

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
304	1,000	1,760	3,100	4,380	5,880

WEIGHTED SKEW (LOGS)= -0.40
MEAN (LOGS)= 2.44
STANDARD DEV. (LOGS)= 0.66

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
236	1.1	6,920	57.0	3.0	12.0	1.4	2.9

09379200 CHINLE CREEK NEAR MEXICAN WATER, AZ

LOCATION.--Lat 36°56'38", long 109°42'36", in sec.19, T.41 N., R.25 E. (unsurveyed), Apache County, Hydrologic Unit 1400204, in Navajo Indian Reservation, on right bank 150 ft upstream from bridge on U.S. Highway 160, 3 mi upstream from Walker Creek, 4 mi southwest of Mexican Water, 5 mi downstream from confluence of Chinle Wash and Laguna Creek, and 6 mi upstream from Arizona-Utah State line.

DRAINAGE AREA.--3,650 mi^2.

REMARKS.--Many Farms Reservoir, above 25 mi upstream, was built in 1939 with an original capacity of 25,000 acre-ft and provides off-channel storage for irrigation of about 1,600 acres.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	2,070	ES
1964	08-01-64	3,280	ES
1965	05-15-65	732	
1966	12-24-65	650	
1967	08-10-67	1,230	
1968	08-08-68	1,040	
1969	01-15-69	590	
1970	09-07-70	[1]9,880	
1971	08-23-71	1,050	
1972	08-28-72	850	
1973	10-20-72	984	
1974	03-02-74	646	
1975	07-13-75	3,680	
1976	09-25-76	1,620	
1977	08-19-77	7,120	
1978	07-18-78	751	
1979	11-12-78	1,390	
1980	09-10-80	1,630	
1981	07-14-81	3,270	
1982	08-24-82	12,000	
1983	07-28-83	3,650	
1984	07-24-84	7,500	
1985	04-30-85	4,914	
1986	09-09-86	1,720	
1987	11-19-86	5,800	
1988	11-06-87	2,900	
1989	08-19-89	2,940	

[1]Highest since 1950.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
12.3	86.8	6,260	24.0	3.0	10.9	1.3	2.7

09379200 CHINLE CREEK NEAR MEXICAN WATER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1965-78, 1980-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	142	0.90	25	33	1.3	6.5
NOVEMBER	144	3.4	17	31	1.8	4.4
DECEMBER	41	1.1	9.5	10	1.0	2.4
JANUARY	71	1.6	14	17	1.3	3.5
FEBRUARY	169	2.4	28	47	1.6	7.2
MARCH	215	0.67	29	50	1.7	7.4
APRIL	402	0.73	69	104	1.5	17.5
MAY	294	0.26	58	88	1.5	14.9
JUNE	73	0.00	7.1	19	2.7	1.8
JULY	129	0.36	28	33	1.2	7.0
AUGUST	501	0.00	64	109	1.7	16.4
SEPTEMBER	342	0.65	43	79	1.8	11.0
ANNUAL	94	4.5	33	28	0.85	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-78, 1981-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.74	0.20	0.09	0.05	0.02	0.01
90	2.4	0.92	0.55	0.35	0.21	0.10
120	4.6	2.4	1.9	1.5	1.3	1.1
183	8.2	4.3	3.2	2.6	2.1	1.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1963-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,060	4,450	6,650	10,200	13,500	17,300

WEIGHTED SKEW (LOGS)= 0.00
MEAN (LOGS)= 3.31
STANDARD DEV. (LOGS)= 0.40

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1965-78, 1980-89

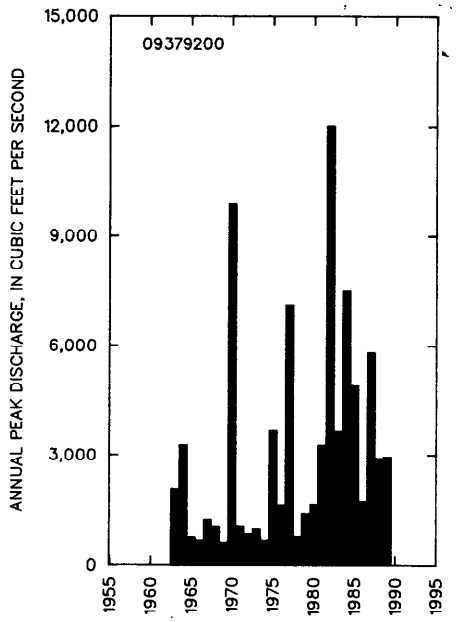
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	797	1,830	2,920	4,950	7,080	9,860
3	511	1,100	1,680	2,690	3,690	4,940
7	287	591	879	1,360	1,820	2,380
15	180	368	537	806	1,050	1,330
30	120	259	388	600	796	1,030
60	70	159	246	396	541	718
90	55	125	194	315	433	579

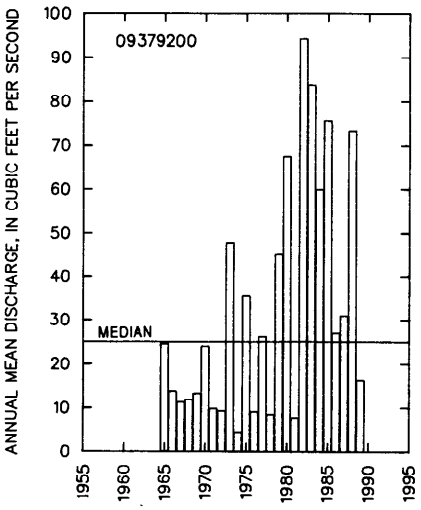
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1965-78, 1980-89

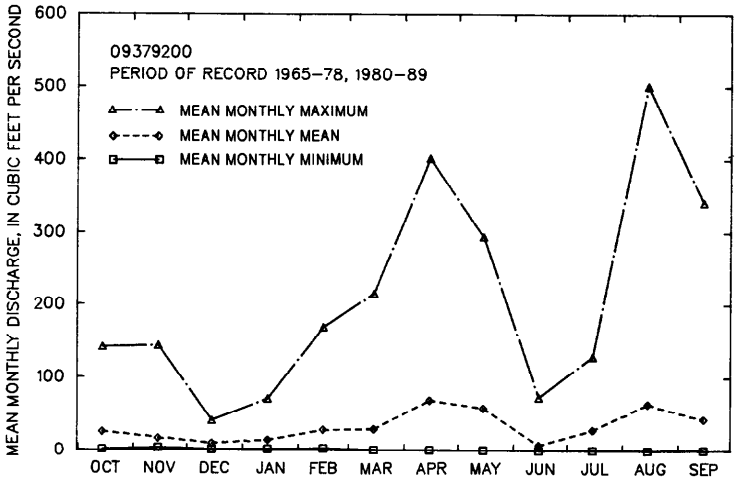
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
516	169	71	33	17	8.2	4.9	3.6	2.3	1.3	0.62	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09379200 CHINLE CREEK NEAR MEXICAN WATER, AZ--CONTINUED







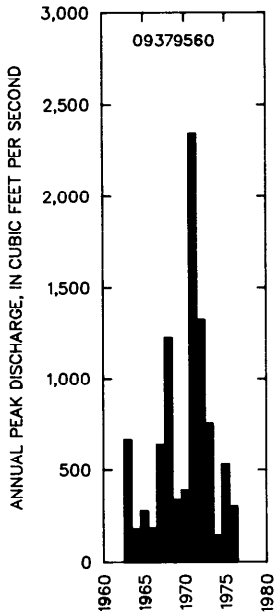
09379560 EL CAPITAN WASH NEAR KAYENTA, AZ

LOCATION.--Lat 36°51'32", long 110°15'55", Navajo County, Hydrologic Unit 14080205, at U.S. Highway 163, 12 mi north of Kayenta.

DRAINAGE AREA.--5.88 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-30-63	663
1964	07-31-64	181
1965	08-02-65	278
1966	10-16-65	185
1967	09-00-67	638
1968	00-00-68	1,225
1969	10-04-68	335
1970	10-11-69	390
1971	08-26-71	2,340
1972	00-00-72	1,320
1973	10-19-72	750
1974	07-20-74	145
1975	07-00-75	530
1976	00-00-76	301



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
470	952	1,390	2,100	2,760	3,530

WEIGHTED SKEW (LOGS)=	0.14
MEAN (LOGS)=	2.68
STANDARD DEV. (LOGS)=	0.36

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
78.4	3.4	5,690	8.0	3.0	9.0	1.2	2.4

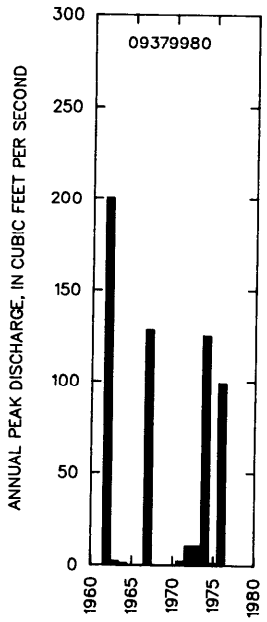
09379980 JACK BENCH WASH TRIBUTARY NEAR PAGE, AZ

LOCATION.--Lat 36°42'50", long 111°35'30", Coconino County, Hydrologic Unit 14070006, at U.S. Highway 89, 17 mi south of Page.

DRAINAGE AREA.--0.98 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	200	
1963	00-00-63	2.0	LT
1964	08-29-64	1.0	ES
1965	00-00-65	0	
1966	00-00-66	0	
1967	07-16-67	128	
1968	00-00-68	0	
1969	00-00-69	0	
1970	00-00-70	0	
1971	00-00-71	2.0	LT
1972	06-22-72	10	LT
1973	00-00-73	10	LT
1974	11-00-73	125	
1975	00-00-75	1.0	LT
1976	00-00-76	99	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
2.6	37.1	141	560	1,330	2,850

WEIGHTED SKEW (LOGS)=	-0.21
MEAN (LOGS)=	0.36
STANDARD DEV. (LOGS)=	1.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
133	2.6	6,180	22.0	3.0	8.8	1.3	2.7

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ
(National stream-quality accounting network)

LOCATION.--Lat 36°51'53", long 111°35'15", in NE¼SE¼ sec.13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070006, in Navajo Indian Reservation, on left bank at head of Marble Gorge at Lees Ferry, just upstream from Paria River, 16 mi downstream from Glen Canyon Dam, 28 mi downstream from Utah-Arizona State line, and 61.5 mi upstream from Little Colorado River.

DRAINAGE AREA.--111,800 mi^2, approximately, including 3,959 mi^2 in Great Divide basin in southern Wyoming which is noncontributing.

REMARKS.--Flow regulated since Mar. 13, 1963, by Lake Powell, 16 mi upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. No diversions or inflow between Lake Powell and the gage.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1884	07-07-84	300,000	ES,HP	1955	06-13-55	35,600	
1921	06-18-21	220,000		1956	06-06-56	69,600	
1922	05-31-22	116,000		1957	06-12-57	126,000	
1923	05-31-23	98,300		1958	06-01-58	105,600	
1924	06-17-24	76,200		1959	06-19-59	38,900	
1925	06-03-25	54,900		1960	06-08-60	46,700	
1926	05-29-26	86,500		1961	06-05-61	40,200	
1927	07-01-27	127,000		1962	05-16-62	85,000	
1928	06-03-28	115,000		1963	10-21-62	19,200	KR
1929	05-29-29	114,000		1964	04-28-64	20,200	KR
1930	06-03-30	73,300		1965	06-15-65	60,200	KR
1931	05-21-31	34,600		1966	05-03-66	21,100	KR
1932	05-26-32	102,000		1967	04-19-67	22,500	KR
1933	06-05-33	82,700		1968	07-19-68	26,800	KR
1934	05-16-34	25,300		1969	08-28-69	26,100	KR
1935	06-19-35	105,000		1970	08-26-70	27,300	KR
1936	05-23-36	76,300		1971	04-05-71	28,700	KR
1937	05-20-37	84,800		1972	07-12-72	30,600	KR
1938	06-08-38	101,000		1973	03-28-73	31,000	KR
1939	05-26-39	49,700		1974	01-02-74	27,700	KR
1940	05-18-40	47,200		1975	05-07-75	28,400	KR
1941	05-17-41	120,000		1976	05-19-76	27,100	KR
1942	05-30-42	92,800		1977	09-07-77	29,000	KR
1943	06-05-43	68,600		1978	01-23-78	28,400	KR
1944	05-19-44	94,400		1979	01-29-79	28,600	KR
1945	05-17-45	64,400		1980	06-24-80	44,800	KR
1946	06-14-46	50,400		1981	07-20-81	25,900	KR
1947	05-13-47	80,400		1982	05-25-82	29,700	KR
1948	05-25-48	92,400		1983	06-29-83	97,300	KR
1949	06-22-49	119,000		1984	08-12-84	58,200	KR
1950	06-06-50	60,600		1985	06-02-85	47,900	KR
1951	06-01-51	67,300		1986	05-13-86	53,200	KR
1952	06-12-52	123,000		1987	12-03-86	31,500	KR
1953	06-17-53	69,600		1988	07-28-88	27,100	KR
1954	05-26-54	34,300		1989	08-28-89	28,400	KR

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1964-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	25,600	1,000	10,700	5,000	0.47	6.4
NOVEMBER	24,800	1,000	11,800	5,390	0.46	7.0
DECEMBER	25,000	1,020	12,400	5,540	0.45	7.4
JANUARY	26,300	1,150	13,600	5,560	0.41	8.0
FEBRUARY	26,700	4,010	12,000	5,530	0.46	7.1
MARCH	24,800	3,320	11,200	5,270	0.47	6.6
APRIL	29,100	2,750	14,000	6,530	0.47	8.3
MAY	44,800	3,340	16,400	10,800	0.66	9.7
JUNE	55,700	1,000	18,500	13,000	0.70	11.0
JULY	54,800	977	17,100	10,200	0.60	10.1
AUGUST	29,800	2,840	16,300	5,980	0.37	9.7
SEPTEMBER	27,100	2,630	14,500	5,660	0.39	8.6
ANNUAL	28,200	3,330	14,000	5,600	0.40	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100†
	50%	20%	10%	5%	2%	1%
1	2,440	1,470	1,110	882	676	565
3	3,710	1,960	1,330	1,040±	770±	580±
7	5,110	2,760	1,880	1,320	859	629
14	6,390	3,500	2,370	1,640	1,040	743
30	7,830	4,520	3,110	2,170	1,380	982
60	9,660	5,650	3,790	2,550	1,520	1,020
90	11,100	6,500	4,320	2,860	1,650	1,090
120	11,500	7,220	5,160	3,710	2,420	1,760
183	12,100	8,070	6,160	4,770	3,440	2,710

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
----	----	----	----	----	----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-89

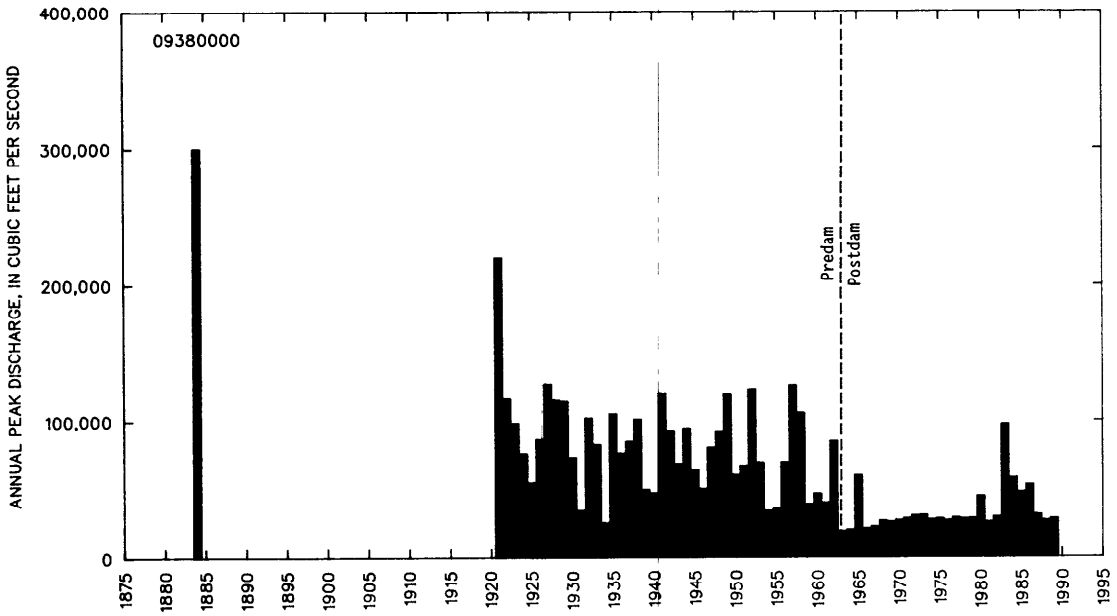
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100†
	50%	20%	10%	4%	2%	1%
1	24,300	35,800	47,000	66,300	85,600	110,000
3	23,400	34,900	45,900	64,900	83,600	107,000
7	22,100	33,600	44,700	64,000	83,200	108,000
15	21,000	32,000	42,400	60,100	77,500	99,300
30	19,800	30,300	40,000	56,100	71,700	90,900
60	18,500	27,500	35,600	48,700	61,000	75,800
90	17,400	25,400	32,200	42,600	51,900	62,700

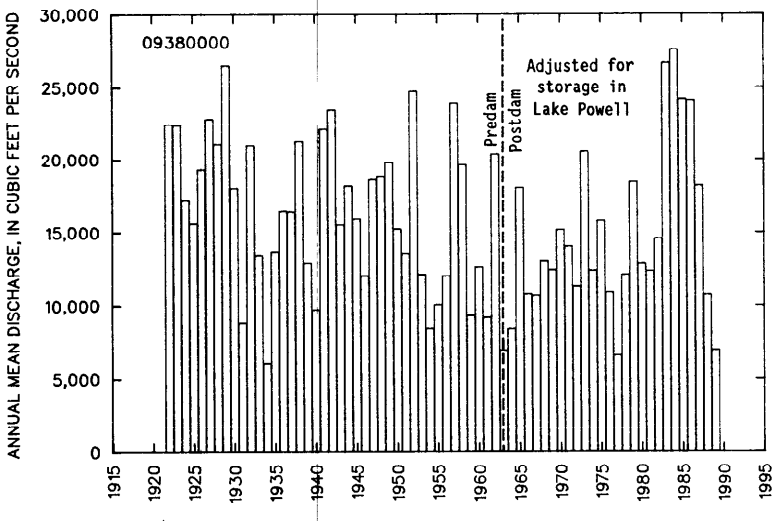
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
47,500	27,600	24,100	21,000	18,700	16,100	14,200	12,600	11,100	9,660	8,060	5,870	3,690	1,070	1,010	951	885

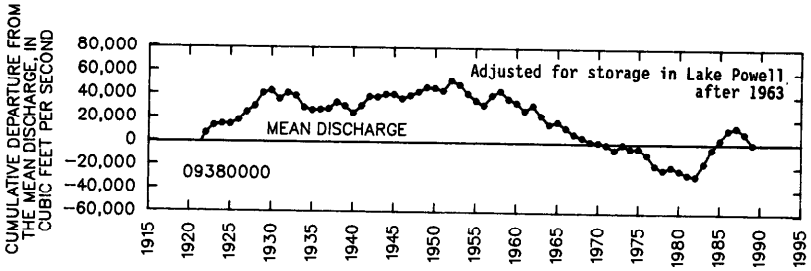
† Reliability of values in column is uncertain, and potential errors are large.
± Adjusted.

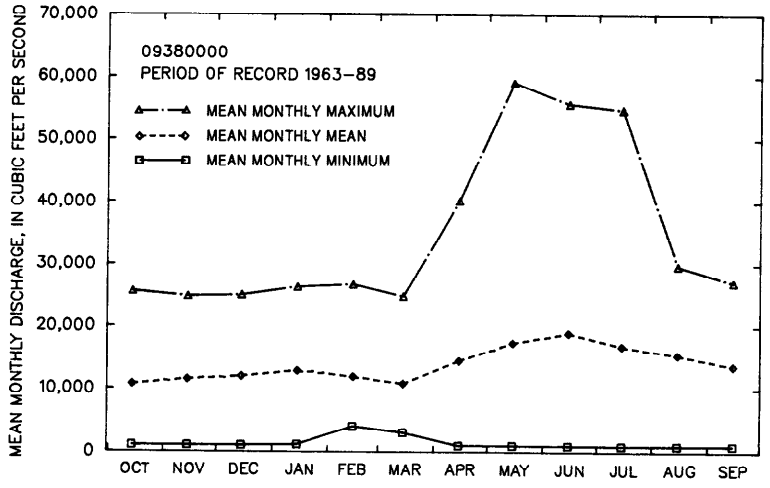
09380000 COLORADO RIVER AT LEES FERRY, AZ--CONTINUED





09380000 COLORADO RIVER AT LEES FERRY, AZ--CONTINUED





PARIA RIVER BASIN

09382000 PARIA RIVER AT LEES FERRY, AZ

LOCATION.--Lat 36°52'20", long 111°35'3", in NW¼NE¼ sec.13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070007, on left bank 0.6 mi northwest of Lees Ferry, and 1.1 mi upstream from mouth.

DRAINAGE AREA.--1,410 mi^2.

REMARKS.--Diversions above station for irrigation of about 3,300 acres, mostly in southern Utah.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1924	09-10-24	4,330		1957	08-22-57	3,310	
1925	09-19-25	4,800		1958	09-12-58	11,500	ES
1926	10-05-25	16,100		1959	08-19-59	5,370	
1927	09-13-27	14,300		1960	06-07-60	370	
1928	07-16-28	2,960		1961	08-04-61	8,040	
1929	08-02-29	12,000		1962	09-21-62	2,830	
1930	08-11-30	7,150		1963	09-01-63	7,150	
1931	11-18-30	2,190		1964	08-12-64	2,360	
1932	08-28-32	10,500		1965	09-06-65	1,220	
1933	08-22-33	3,660		1966	11-23-65	2,140	
1934	08-29-34	8,400		1967	12-07-66	3,500	
1935	09-01-35	2,700		1968	07-27-68	4,090	
1936	07-11-36	8,700		1969	01-26-69	2,570	
1937	08-29-37	3,720		1970	08-20-70	3,010	
1938	03-03-38	7,440		1971	08-26-71	1,880	
1939	09-13-39	9,800		1972	06-22-72	4,750	
1940	09-06-40	14,000		1973	10-19-72	5,530	
1941	07-24-41	7,500		1974	07-23-74	520	
1942	10-28-41	1,680		1975	07-30-75	3,680	
1943	08-22-43	4,680		1976	02-09-76	718	
1944	10-19-43	8,400		1977	08-17-77	2,070	
1945	09-03-45	3,290		1978	03-05-78	1,270	
1946	07-25-46	4,980		1979	11-03-78	2,890	
1947	08-22-47	7,650		1980	09-09-80	8,520	
1948	08-05-48	6,150		1981	08-14-81	2,110	
1949	09-29-49	3,410		1982	10-03-81	2,400	
1950	07-19-50	1,340		1983	07-25-83	2,950	
1951	08-04-51	4,480		1984	08-07-84	1,880	
1952	09-22-52	1,830		1985	08-07-85	416	
1953	08-27-53	6,400		1986	07-15-86	3,520	
1954	09-12-54	3,980		1987	08-08-87	1,990	
1955	08-17-55	3,010		1988	11-06-87	910	
1956	08-17-56	1,420		1989	08-11-89	1,240	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
43.0	78.0	6,150	73.0	3.0	12.0	1.4	3.0

09382000 PARIA RIVER AT LEES FERRY, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1924-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	288	6.0	30	43	1.4	8.6
NOVEMBER	123	11	24	19	0.77	6.9
DECEMBER	69	8.8	22	9.9	0.46	6.1
JANUARY	97	8.0	22	12	0.54	6.3
FEBRUARY	242	16	38	33	0.86	10.8
MARCH	216	8.9	38	36	0.95	10.8
APRIL	93	4.9	21	19	0.91	6.0
MAY	52	2.0	10	9.4	0.92	2.9
JUNE	58	2.0	7.2	9.5	1.3	2.0
JULY	172	2.3	26	29	1.1	7.4
AUGUST	237	4.5	58	51	0.87	16.5
SEPTEMBER	424	4.2	55	83	1.5	15.6
ANNUAL	65	11	29	12	0.40	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1925-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2.4	1.8	1.5	1.2	1.0	0.89
3	2.7	2.0	1.7	1.5	1.2	1.0
7	2.9	2.3	1.9	1.7	1.4	1.2
14	3.1	2.5	2.2	2.0	1.8	1.7
30	3.4	2.8	2.5	2.3	2.2	2.1
60	4.3	3.4	3.1	2.8	2.7	2.6
90	6.4	4.4	3.8	3.3	2.9	2.7
120	11	7.2	5.7	4.6	3.6	3.1
183	19	13	10	8.5	6.8	5.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1924-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,700	6,790	9,360	13,200	16,500	20,200

WEIGHTED SKEW (LOGS)= 0.04
MEAN (LOGS)= 3.57
STANDARD DEV. (LOGS)= 0.31

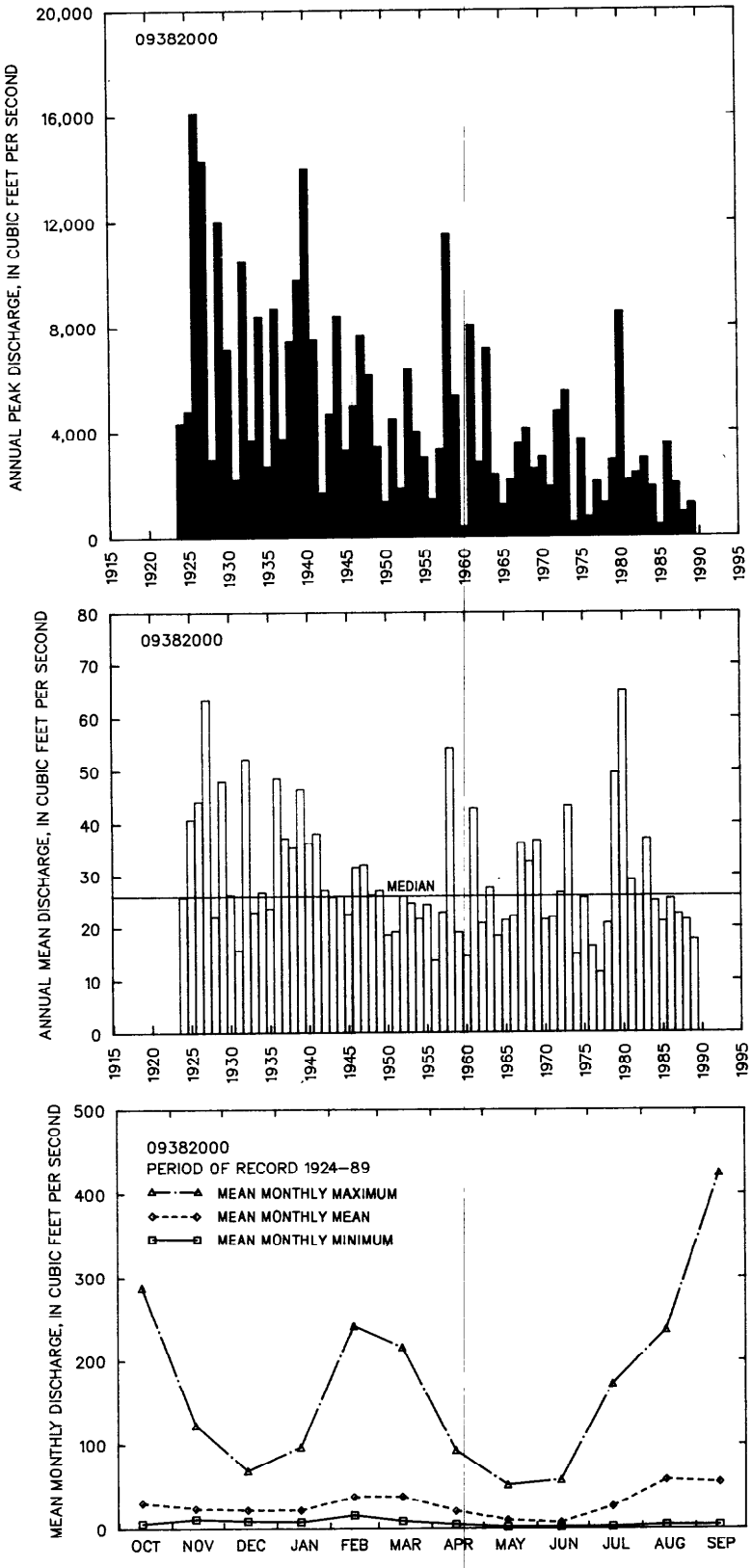
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1924-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	824	1,790	2,760	4,450	6,130	8,220
3	423	892	1,360	2,190	3,010	4,060
7	229	458	680	1,060	1,440	1,900
15	139	262	376	563	740	954
30	94	168	232	332	423	529
60	64	108	145	202	252	311
90	50	80	106	145	178	217

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1924-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
328	78	44	33	28	22	18	14	10	6.7	4.9	3.8	3.2	2.3	2.0	1.8	1.4

09382000 PARIA RIVER AT LEES FERRY, AZ--CONTINUED



09383020 HOUSE ROCK WASH TRIBUTARY NEAR MARBLE CANYON, AZ

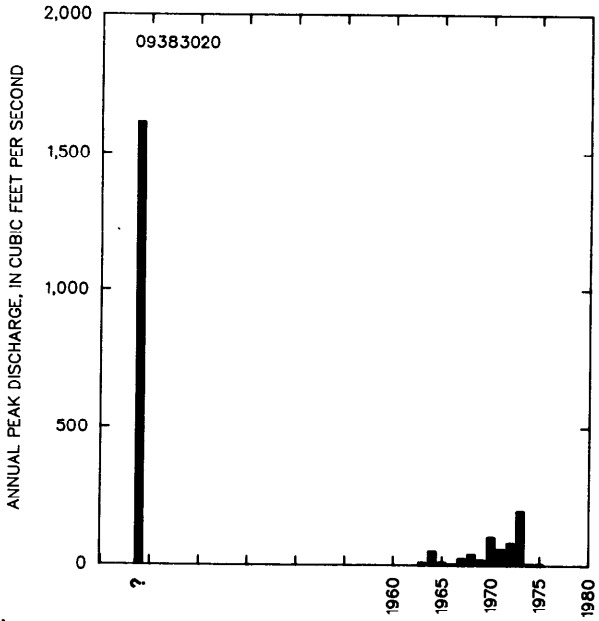
LOCATION.--Lat 36°42'05", long 111°55'45", in SE¼SE¼ sec.11, T.38 N., R.4 E., Coconino County, Hydrologic Unit 15010001, at U.S. Highway 89 Alternate, 21 mi southwest of Marble Canyon Post Office.

DRAINAGE AREA.--3.54 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
----	--------	[1]1,610	HP
1963	09-04-63	10	LT
1964	09-13-64	50	ES
1965	00-00-65	10	LT
1966	00-00-66	5.0	LT
1967	07-28-67	24	
1968	00-00-68	39	
1969	07-27-69	19	
1970	07-23-70	100	ES
1971	08-07-71	58	
1972	06-22-72	80	
1973	10-19-72	197	
1974	11-04-73	5.0	LT
1975	00-00-75	5.0	LT

[1]Highest since 1934, year of occurrence unknown



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1934, 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
24.7	81.8	161	342	569	913

WEIGHTED SKEW (LOGS)= 0.37
MEAN (LOGS)= 1.43
STANDARD DEV. (LOGS)= 0.59

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
209	3.7	5,290	2.3	3.0	9.6	1.5	3.2

09383400 LITTLE COLORADO RIVER AT GREER, AZ

LOCATION.--Lat 34°01'00", long 109°27'24", in NE¼SE¼ sec.11, T.7 N., R.27 E., Apache County, Hydrologic Unit 15020001, in Apache-Sitgreaves National Forest, on upstream side of right abutment of culverts on State Highway 373, at Greer, 0.1 mi downstream from Filler ditch.

DRAINAGE AREA.--29.1 mi^2.

REMARKS.--Filler ditch diverts about 1,700 acre-ft/yr from river 0.1 mi above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1961	04-05-61	76	
1962	04-15-62	277	
1963	03-28-63	108	
1964	04-12-64	135	
1965	04-22-65	355	
1966	04-03-66	326	
1967	08-11-67	216	
1968	04-15-68	316	
1969	09-08-69	414	
1970	09-06-70	112	
1971	08-29-71	42	
1972	10-24-71	108	
1973	10-20-72	615	
1974	03-30-74	45	
1975	04-26-75	231	
1976	04-10-76	97	
1977	04-09-77	174	
1978	04-07-78	78	
1979	04-26-79	247	
1980	04-22-80	221	
1981	04-10-81	100	
1982	04-12-82	212	
1984	10-02-83	444	HP

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
180	10.4	9,400	69.0	2.9	31.2	2.8	5.1

09383400 LITTLE COLORADO RIVER AT GREER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1961-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	35	0.64	5.9	7.3	1.2	3.2
NOVEMBER	11	0.99	4.4	2.7	0.61	2.4
DECEMBER	15	1.6	5.6	3.3	0.59	3.0
JANUARY	18	2.3	6.2	3.2	0.51	3.3
FEBRUARY	17	2.8	7.2	3.3	0.47	3.8
MARCH	26	3.5	9.7	5.0	0.51	5.2
APRIL	107	7.4	43	30	0.70	22.8
MAY	163	7.3	41	37	0.89	22.0
JUNE	96	6.4	26	24	0.91	13.9
JULY	28	5.9	13	6.7	0.51	7.0
AUGUST	54	5.7	14	9.9	0.69	7.7
SEPTEMBER	37	5.0	11	7.4	0.67	5.9
ANNUAL	38	6.0	16	8.3	0.53	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	2.0	0.99	0.57	0.32	0.15	0.08
3	2.2	1.1	0.61	0.34	0.15	0.08
7	2.3	1.1	0.63	0.34	0.15	0.08
14	2.5	1.2	0.66	0.36	0.16	0.08
30	2.5	1.4	0.96	0.69	0.46	0.35
60	3.0	1.8	1.3	1.0	0.77	0.63
90	3.6	2.3	1.8	1.5	1.2	0.98
120	4.4	3.1	2.6	2.2	1.8	1.5
183	5.4	4.2	3.6	3.2	2.8	2.6

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-82, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
175	316	425	575	695	822

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 2.23
STANDARD DEV. (LOGS)= 0.31

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-82

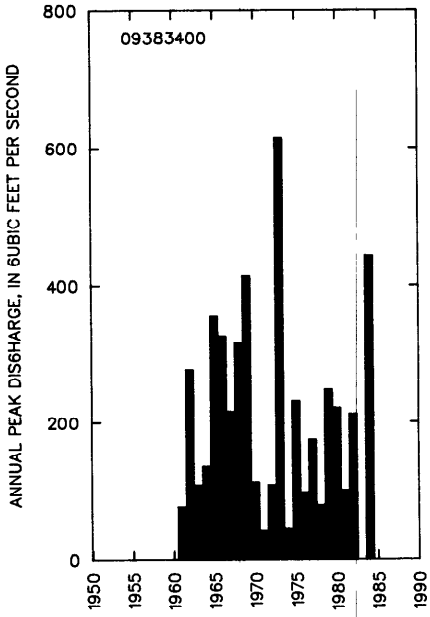
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	95	164	213	277	325	374
3	82	146	193	255	303	352
7	68	124	167	227	275	325
15	55	105	147	208	259	315
30	45	87	121	172	215	262
60	37	70	97	137	169	205
90	31	57	78	109	134	162

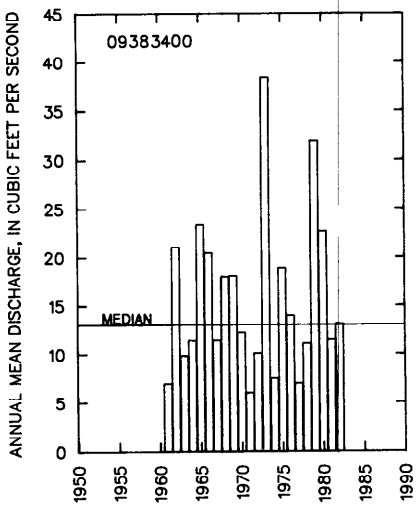
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-82

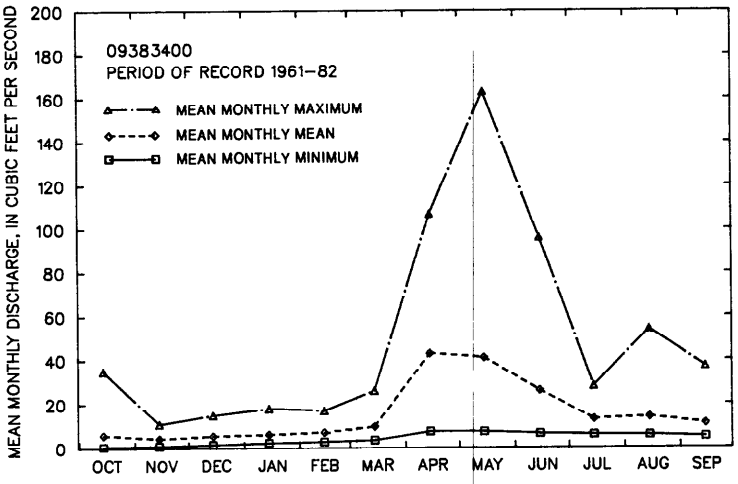
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
133	58	36	26	20	13	10	8.2	6.8	5.5	4.1	2.7	1.8	1.3	0.96	0.73	0.11

† Reliability of values in column is uncertain, and potential errors are large.

09383400 LITTLE COLORADO RIVER AT GREER, AZ--CONTINUED







09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, AZ

LOCATION.--Lat 34°01'49", long 109°11'09", in NE¼SW¼ sec.4, T.7 N., R.30 E., Apache County, Hydrologic Unit 15020001, in Apache-Sitgreaves National Forest, on right bank 2.4 mi upstream from dam on Nelson Reservoir and 9 mi southeast of Springerville.

DRAINAGE AREA.--83.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	09-05-67	126	
1968	04-15-68	121	
1969	09-08-69	133	
1970	04-11-70	30	
1971	09-01-71	291	
1972	10-25-71	67	
1973	04-28-73	439	
1974	03-31-74	7.1	
1975	04-25-75	142	
1976	04-05-76	41	
1977	09-03-77	90	
1978	03-31-78	88	
1979	12-18-78	462	
1980	04-21-80	174	
1981	04-10-81	29	
1982	04-13-82	37	
1984	10-02-83	700	HP

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
78.0	12.6	8,550	75.0	3.0	20.0	1.7	3.4

09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	16	0.00	2.4	4.3	1.8	3.3
NOVEMBER	6.4	0.20	1.7	2.1	1.2	2.4
DECEMBER	26	0.15	2.8	6.6	2.3	4.0
JANUARY	9.5	0.17	2.2	2.7	1.2	3.1
FEBRUARY	16	0.23	3.9	4.3	1.1	5.5
MARCH	32	0.39	9.1	9.0	0.99	12.8
APRIL	106	0.20	28	35	1.2	39.8
MAY	117	0.12	15	30	2.0	20.8
JUNE	12	0.01	2.0	3.7	1.8	2.9
JULY	7.1	0.00	0.93	1.8	1.9	1.3
AUGUST	5.0	0.00	1.2	1.3	1.1	1.6
SEPTEMBER	11	0.00	1.8	2.8	1.6	2.5
ANNUAL	25	0.56	5.9	7.1	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.02	0.00	0.00	0.00	0.00	0.00
30	0.09	0.00	0.00	0.00	0.00	0.00
60	0.17	0.00	0.00	0.00	0.00	0.00
90	0.19	0.04	0.01	0.00	0.00	0.00
120	0.24	0.08	0.05	0.03	0.01	0.01
183	0.48	0.22	0.15	0.11	0.07	0.05

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1967-82, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
117	263	403	636	854	1,100

WEIGHTED SKEW (LOGS)= 0.01
MEAN (LOGS)= 2.07
STANDARD DEV. (LOGS)= 0.42

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-82

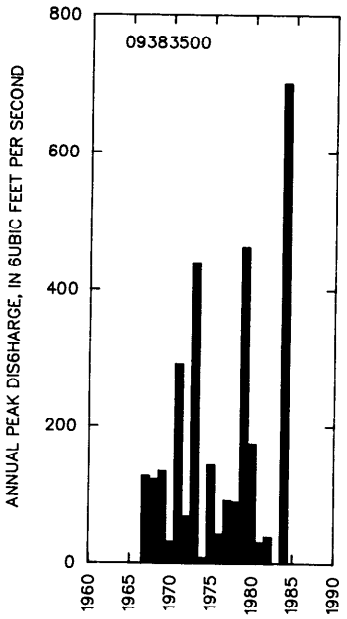
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	52	122	183	276	354	439
3	40	99	160	264	364	486
7	30	81	138	247	361	512
15	23	67	118	223	339	497
30	17	50	91	178	277	417
60	11	34	63	122	189	283
90	8.8	27	48	91	137	200

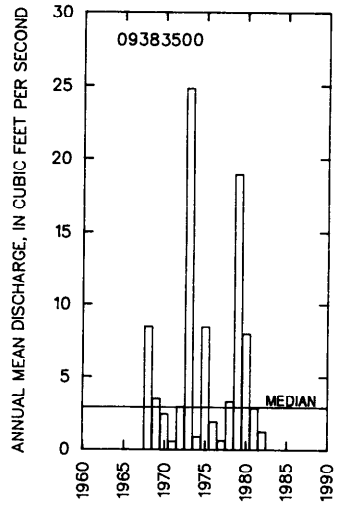
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-82

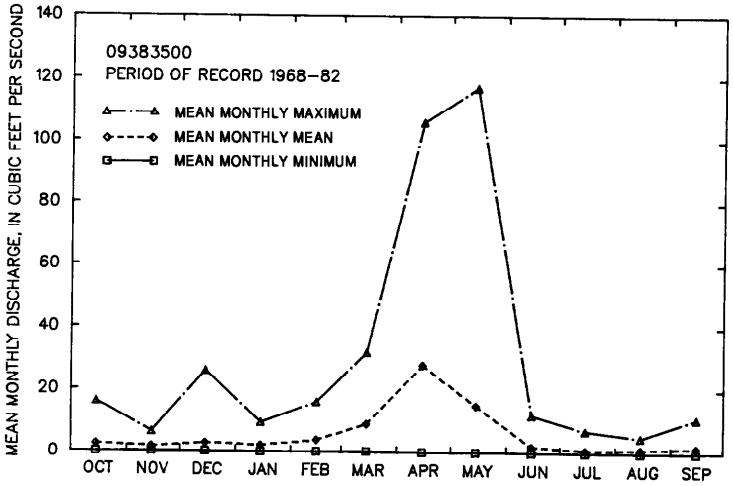
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
100	29	14	7.9	4.9	2.4	1.2	0.68	0.44	0.28	0.18	0.05	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, AZ--CONTINUED







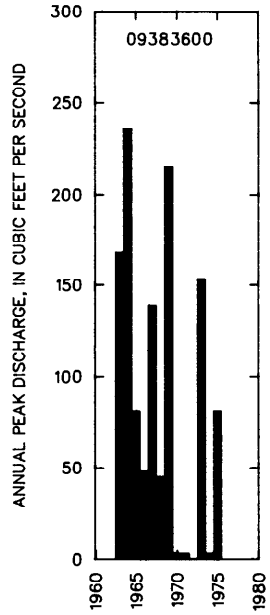
09383600 FISH CREEK NEAR EAGAR, AZ

LOCATION.--Lat 34°04'35", long 109°27'45", in SW¼NE¼ sec.23, T.8 N., R.27 E., Apache County, Hydrologic Unit 15020001, at State Highway 73, 10.5 mi west of Eagar.

DRAINAGE AREA.--16.9 mi^2, of which 2.5 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-21-63	168	
1964	08-01-64	236	
1965	07-25-65	81	
1966	04-03-66	48	
1967	09-05-67	139	
1968	00-00-68	45	
1969	09-08-69	215	
1970	00-00-70	3.0	ES
1971	00-00-71	3.0	LT
1972	00-00-72	0	
1973	04-00-73	153	
1974	00-00-74	3.0	ES
1975	09-07-75	81	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
74.5	159	227	325	403	485

WEIGHTED SKEW (LOGS)=	-0.42
MEAN (LOGS)=	1.84
STANDARD DEV. (LOGS)=	0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
164	8.1	9,160	38.0	3.0	26.1	1.8	4.2

09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ

LOCATION.--Lat 34°18'52", long 109°21'42", in SW¼SE¼ sec.27, T.11 N., R.28 E., Apache County, Hydrologic Unit 15020001, on left bank 0.75 mi downstream from Coyote Creek, 6 mi upstream from Lyman Dam, and 15 mi south of St. Johns. Prior to December 7, 1976, at site 0.4 mi downstream.

DRAINAGE AREA.--706 mi^2, of which 250 mi^2 is noncontributing.

REMARKS.--Flow regulated by many small reservoirs—combined capacity, about 15,500 acre-ft. Diversions for irrigation of about 6,700 acres above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	07-25-40	[1]16,000	HP	1965	04-23-65	527	UR
1941	07-23-41	2,520	UR	1966	04-04-66	658	UR
1942	08-10-42	379	UR	1967	07-27-67	4,850	UR
1943	08-22-43	2,360	UR	1968	04-16-68	460	UR
1944	08-15-44	3,400	UR	1969	07-26-69	764	UR
1945	08-11-45	740	UR	1970	04-09-70	120	UR
1946	08-04-46	6,000	UR	1971	09-09-71	229	UR
1947	08-22-47	1,620	UR	1972	08-29-72	225	UR
1948	04-17-48	732	UR	1973	04-29-73	1,180	UR
1949	08-02-49	1,000	UR	1974	08-04-74	3,240	UR
1950	07-18-50	181	UR	1975	09-12-75	1,600	UR
1951	08-02-51	3,200	UR	1976	04-09-76	170	UR
1952	08-28-52	1,570	UR	1977	08-21-77	389	UR
1953	08-10-53	229	UR	1978	08-01-78	389	UR
1954	08-05-54	1,390	UR	1979	04-00-79	1,500	UR
1955	08-23-55	2,990	UR	1980	04-23-80	840	UR
1956	08-18-56	206	UR	1981	08-01-81	618	UR
1957	08-27-57	2,850	UR	1982	08-29-82	260	UR
1958	04-23-58	1,120	UR	1983	08-03-83	1,340	UR
1959	08-08-59	1,340	UR	1984	10-02-83	2,330	UR
1960	03-30-60	323	UR	1985	03-13-85	695	UR
1961	08-11-61	619	UR	1986	08-26-86	292	UR
1962	04-16-62	736	UR	1987	04-20-87	1,090	UR
1963	08-26-63	733	UR	1988	09-01-88	414	UR
1964	07-31-64	1,160	UR	1989	07-28-89	165	UR

[1]Highest since 1900.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
89.5	41.7	7,760	39.0	2.93	20.0	1.6	3.3

09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	213	0.07	11	30	2.8	3.8
NOVEMBER	38	0.32	8.3	8.0	0.97	2.9
DECEMBER	47	0.83	11	10	0.95	3.8
JANUARY	39	2.1	11	8.3	0.73	4.0
FEBRUARY	43	2.8	13	8.7	0.65	4.7
MARCH	182	2.5	31	35	1.1	10.7
APRIL	397	1.3	101	110	1.1	35.2
MAY	374	0.73	41	74	1.8	14.3
JUNE	95	0.01	10	18	1.7	3.7
JULY	40	0.00	11	9.9	0.93	3.7
AUGUST	143	0.83	25	29	1.2	8.7
SEPTEMBER	105	0.02	13	20	1.5	4.6
ANNUAL	72	2.9	24	18	0.77	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.0
3	0.00	0.00	0.00	0.00	0.00	0.0
7	0.00	0.00	0.00	0.00	0.00	0.0
14	0.00	0.00	0.00	0.00	0.00	0.0
30	0.00	0.00	0.00	0.00	0.00	0.0
60	2.4	0.80	0.40	0.21	0.09	0.05
90	3.2	1.3	0.80	0.50	0.29	0.20
120	4.6	2.2	1.4	0.91	0.55	0.39
183	6.4	3.2	2.2	1.6	1.1	0.84

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1940-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
810	1,960	3,150	5,280	7,420	10,100

WEIGHTED SKEW (LOGS)= 0.12
MEAN (LOGS)= 2.94
STANDARD DEV. (LOGS)= 0.44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-89

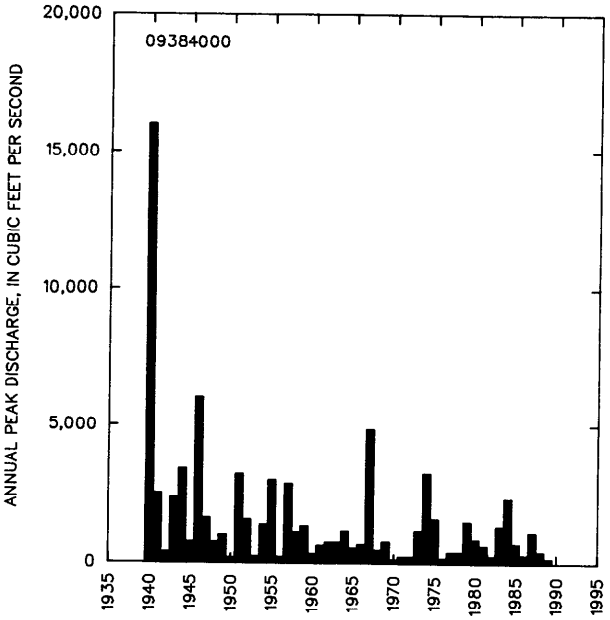
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	283	600	866	1,250	1,580	1,920
3	222	505	751	1,120	1,430	1,770
7	177	411	617	928	1,190	1,480
15	130	308	472	730	958	1,210
30	90	216	333	520	686	876
60	58	138	213	336	448	579
90	43	101	156	244	326	421

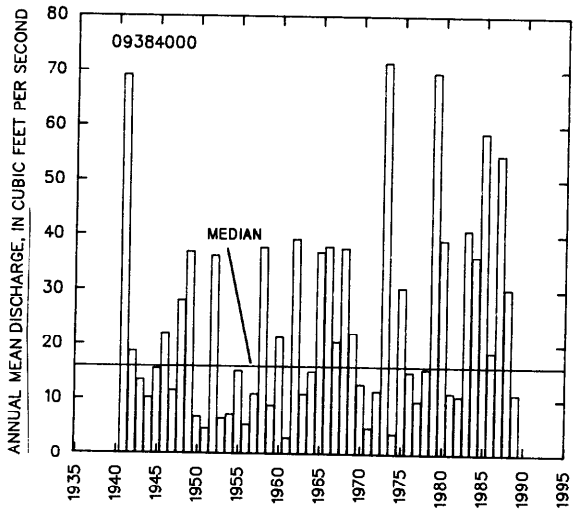
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
350	96	47	31	23	14	9.9	7.3	5.6	4.1	2.6	1.3	0.62	0.10	0.00	0.00	0.00

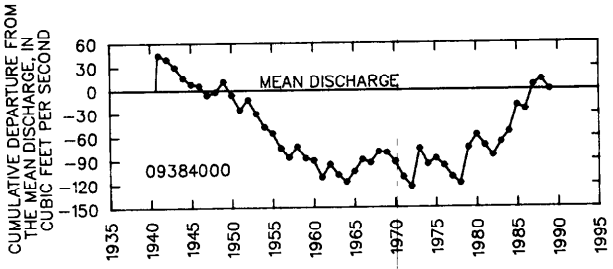
† Reliability of values in column is uncertain, and potential errors are large.

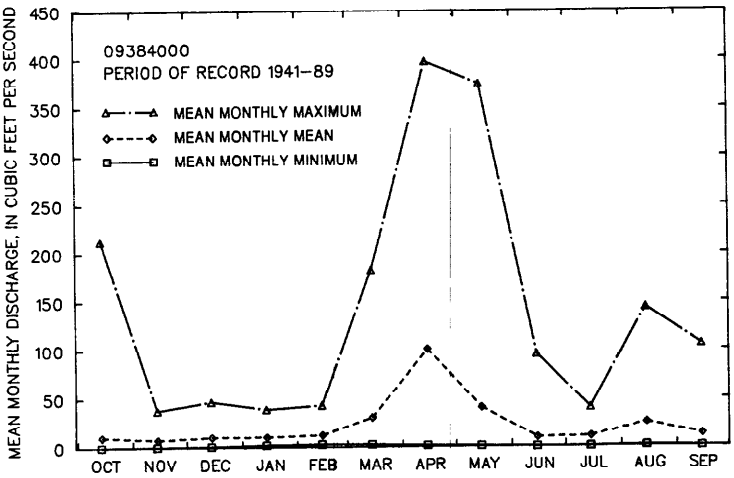
09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ--CONTINUED





09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ--CONTINUED





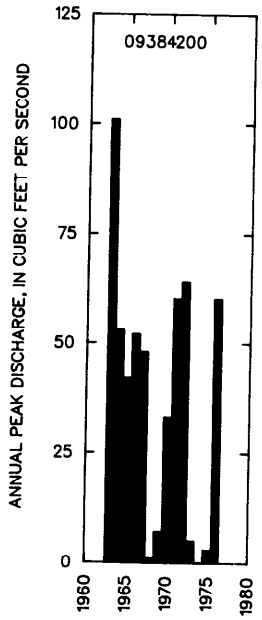
09384200 LYMAN RESERVOIR TRIBUTARY NEAR ST. JOHNS, AZ

LOCATION.--Lat 34°23'30", long 109°22'48", in SE¼NE¼ sec.9, T.11 N., R.28 E., Apache County, Hydrologic Unit 15020002, at Lyman Reservoir Road, 10 mi south of St. Johns.

DRAINAGE AREA.--0.24 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-26-63	101	
1964	08-11-64	53	
1965	08-02-65	42	
1966	09-30-66	52	
1967	00-00-67	48	
1968	00-00-68	1.0	LT
1969	09-00-69	7.0	
1970	07-20-70	33	
1971	08-00-71	60	
1972	07-24-72	64	
1973	07-00-73	5.0	
1974	00-00-74	0	
1975	09-06-75	3.0	ES
1976	00-00-76	60	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
42.8	62	74.9	91.4	104	116

WEIGHTED SKEW (LOGS)= -0.11
MEAN (LOGS)= 1.63
STANDARD DEV. (LOGS)= 0.20

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
267	1.0	6,100	58.0	3.0	11.6	1.55	3.3

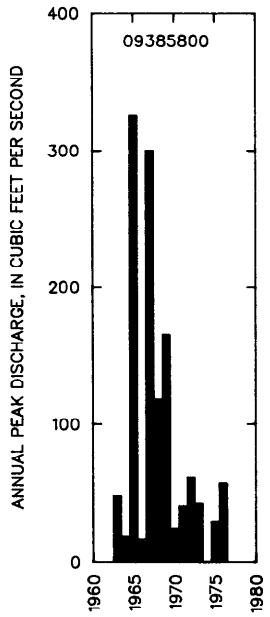
09385800 LITTLE COLORADO RIVER TRIBUTARY NEAR ST. JOHNS, AZ

LOCATION.--Lat 34°27'04", long 109°15'23", in NE¼SE¼ sec.10, T.12 N., R.29 E., Apache County, Hydrologic Unit 15020002, at county road, 7 mi southeast of St. Johns.

DRAINAGE AREA.--0.35 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-00-63	48
1964	08-27-64	18
1965	09-04-65	326
1966	08-30-66	16
1967	00-00-67	300
1968	08-00-68	118
1969	07-00-69	165
1970	10-21-69	24
1971	08-00-71	40
1972	12-26-71	61
1973	07-00-73	42
1974	00-00-74	0
1975	07-29-75	29
1976	08-00-76	57



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
52	127	206	348	491	672

WEIGHTED SKEW (LOGS)= 0.13
MEAN (LOGS)= 1.73
STANDARD DEV. (LOGS)= 0.46

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
417	0.48	6,350	54.0	1.0	11.1	1.5	2.9

09386500 LITTLE COLORADO RIVER ABOVE ZUNI RIVER, NEAR HUNT, AZ

LOCATION.--Lat 34°38'30", long 109°40'35", in SW¼NW¼ sec.2, T.14 N., R.25 E. (unsurveyed), Apache County, Hydrologic Unit 15020002, on right bank 500 ft upstream from Zuni River and 3.6 mi northwest of Hunt.

DRAINAGE AREA.--3,741 mi^2, of which 184 mi^2 is noncontributing.

REMARKS.--Diversions for irrigation of about 11,000 acres above station. Considerable regulation by many reservoirs (combined capacity about 50,000 acre-ft), the largest of which is Lyman Lake, 40 mi upstream.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	07-26-40	577	UR	1957	09-01-57	476	UR
1941	05-11-41	516	UR	1958	08-21-58	1,020	UR
1942	10-07-41	37	UR	1959	08-11-59	130	UR
1943	09-25-43	11	UR	1960	10-30-59	38	UR
1944	09-26-44	101	UR	1961	09-11-61	2.6	UR
1945	08-13-45	1,100	UR	1962	01-31-62	10	UR,LT
1946	08-04-46	745	UR	1963	09-04-63	34	UR
1947	08-04-47	301	UR	1964	08-09-64	233	UR
1948	09-17-48	75	UR	1965	09-08-65	194	UR
1949	08-10-49	478	UR	1966	09-14-66	56	UR
1950	07-07-50	140	UR	1967	08-01-67	176	UR
1951	08-28-51	70	UR	1968	08-07-68	179	UR
1952	07-27-52	67	UR	1969	07-23-69	747	UR
1953	07-27-53	62	UR	1970	08-16-70	52	UR
1954	07-26-54	136	UR	1971	09-03-71	1,310	UR,DF
1955	08-24-55	831	UR	1972	10-01-71	552	UR
1956	02-19-56	37	UR				

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
40.2	87.9	7,160	25.0	2.9	14.6	1.5	3.1

09386500 LITTLE COLORADO RIVER ABOVE ZUNI RIVER, NEAR HUNT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-72

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	41	0.00	3.3	7.9	2.4	5.4
NOVEMBER	9.3	0.00	2.0	2.7	1.3	3.3
DECEMBER	16	0.00	3.2	3.8	1.2	5.2
JANUARY	15	0.00	3.8	4.1	1.1	6.1
FEBRUARY	14	0.00	3.8	4.2	1.1	6.1
MARCH	29	0.00	2.9	5.5	1.9	4.8
APRIL	10	0.00	1.2	2.5	2.1	2.0
MAY	148	0.00	5.0	26	5.2	8.2
JUNE	7.6	0.00	0.44	1.3	3.0	0.7
JULY	20	0.00	1.7	3.9	2.3	2.8
AUGUST	338	0.00	25	64	2.6	40.6
SEPTEMBER	71	0.00	9.2	17	1.9	14.9
ANNUAL	30	0.01	5.2	6.3	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-72

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.04	0.00	0.00	0.00	0.00	0.00
120	0.11	0.02	0.00	0.00	0.00	0.00
183	0.77	0.08	0.01	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1940-72

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
164	474	819	1,460	2,110	2,930

WEIGHTED SKEW (LOGS)= -0.07
MEAN (LOGS)= 2.21
STANDARD DEV. (LOGS)= 0.55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-72

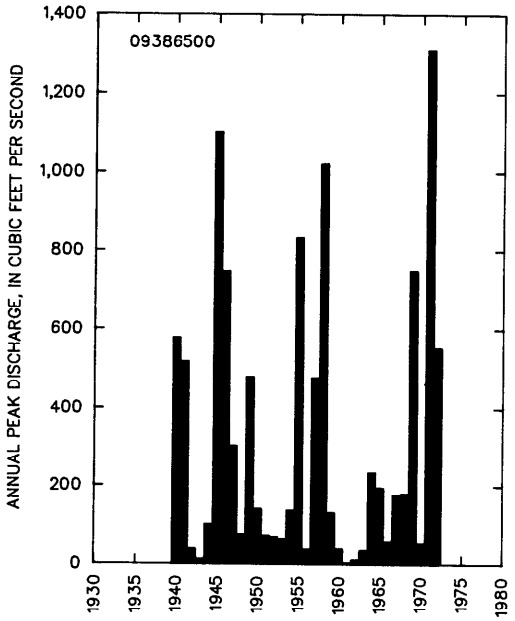
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	63	276	550	1,080	1,630	2,300
3	46	213	439	903	1,400	2,030
7	32	147	303	617	949	1,370
15	22	98	194	373	546	751
30	15	61	116	209	294	387
60	10	39	68	111	145	177
90	7.9	29	49	75	94	112

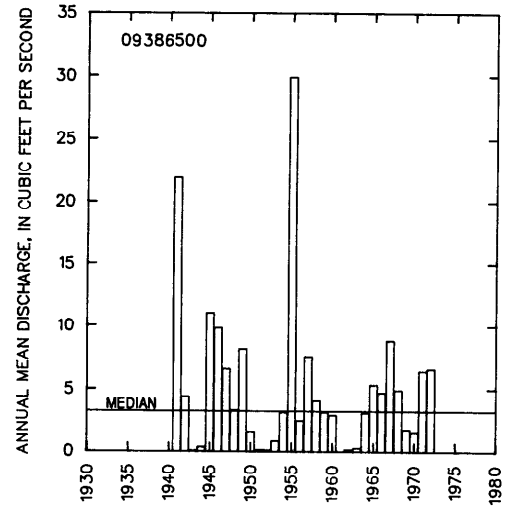
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-72

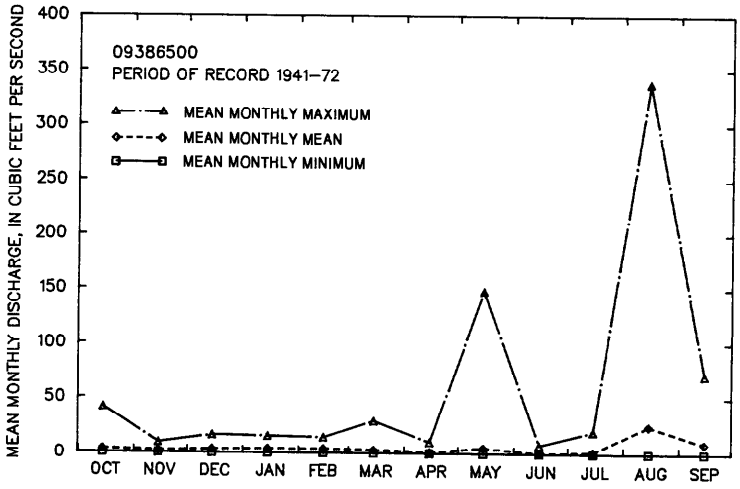
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
89	13	8.2	6.2	4.0	1.5	0.63	0.19	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09386500 LITTLE COLORADO RIVER ABOVE ZUNI RIVER, NEAR HUNT, AZ--CONTINUED







09388000 LITTLE COLORADO RIVER NEAR HUNT, AZ

LOCATION.--Lat 34°38'50", long 109°42'10", in NE¼NW¼ sec.4, T.14 N., R.25 E., (unsurveyed), Apache County, Hydrologic Unit 15020002, near left bank on upstream side of pier of bridge on U.S. Highway 180, 2 mi downstream from Zuni River and 5 mi northwest of Hunt.

DRAINAGE AREA.--6,383 mi^2, of which 210 mi^2 is noncontributing.

REMARKS.--Diversions for irrigation above station of about 14,000 acres. Considerable regulation by many reservoirs (combined capacity, about 59,000 acre-ft).

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1929	07-28-29	8,000	UR	1954	07-26-54	214	UR
1930	08-07-30	965	UR	1955	08-08-55	2,550	UR
1931	08-05-31	3,600	UR	1956	07-22-56	145	UR
1932	08-29-32	1,200	UR	1957	09-01-57	882	UR
1933	07-24-33	3,600	UR	1958	08-21-58	1,400	UR
1940	07-26-40	2,110	UR	1959	08-04-59	235	UR
1941	07-25-41	1,560	UR	1960	10-30-59	453	UR
1942	10-04-41	725	UR	1961	08-15-61	272	UR
1943	08-11-43	508	UR	1962	10-31-61	112	UR
1944	09-30-44	451	UR	1963	08-21-63	232	UR
1945	08-13-45	1,590	UR	1964	08-04-64	580	UR
1946	08-05-46	2,390	UR	1965	09-04-65	545	UR
1947	08-23-47	1,290	UR	1966	08-15-66	570	UR
1948	10-14-47	925	UR	1967	08-14-67	748	UR
1949	08-09-49	4,050	UR	1968	08-04-68	1,140	UR
1950	07-24-50	119	UR	1969	07-24-69	2,360	UR
1951	08-28-51	531	UR	1970	08-17-70	378	UR
1952	09-22-52	395	UR	1971	09-03-71	1,900	UR
1953	07-18-53	42	UR	1972	10-01-71	1,230	UR

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
37.6	90.4	7,060	27.0	2.9	13.4	1.4	2.8

09388000 LITTLE COLORADO RIVER NEAR HUNT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1930-33, 1941-72

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	105	0.00	11	24	2.1	6.6
NOVEMBER	10	0.00	3.1	3.3	1.0	1.8
DECEMBER	20	0.00	4.2	4.6	1.1	2.4
JANUARY	33	0.00	5.4	6.7	1.2	3.2
FEBRUARY	149	0.00	9.1	25	2.7	5.3
MARCH	223	0.00	14	47	3.3	8.3
APRIL	315	0.00	16	59	3.7	9.1
MAY	239	0.00	7.6	40	5.3	4.4
JUNE	9.1	0.00	0.93	1.8	1.9	0.5
JULY	68	0.00	11	17	1.6	6.4
AUGUST	524	0.00	63	105	1.7	36.4
SEPTEMBER	170	0.00	27	42	1.6	15.5
ANNUAL	79	0.44	14	18	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1931-33, 1941-72

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.10	0.00	0.00	0.00	0.00	0.00
90	0.19	0.00	0.00	0.00	0.00	0.00
120	0.70	0.09	0.01	0.00	0.00	0.00
183	2.4	0.47	0.15	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1929-33, 1940-72

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
801	1,930	3,040	4,890	6,630	8,700

WEIGHTED SKEW (LOGS)= -0.08
MEAN (LOGS)= 2.90
STANDARD DEV. (LOGS)= 0.46

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1930-33, 1941-72

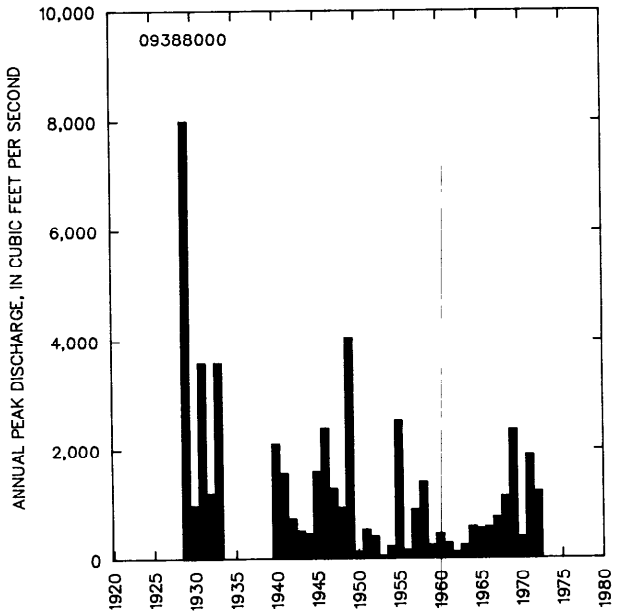
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	374	904	1,320	1,870	2,270	2,660
3	229	600	922	1,380	1,740	2,110
7	132	373	603	962	1,270	1,610
15	77	230	392	670	932	1,240
30	47	146	258	466	677	941
60	30	95	170	314	463	653
90	22	68	122	223	328	462

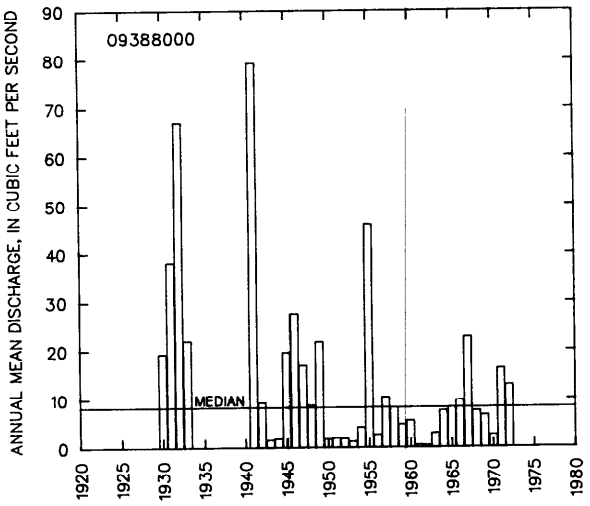
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-33, 1941-72

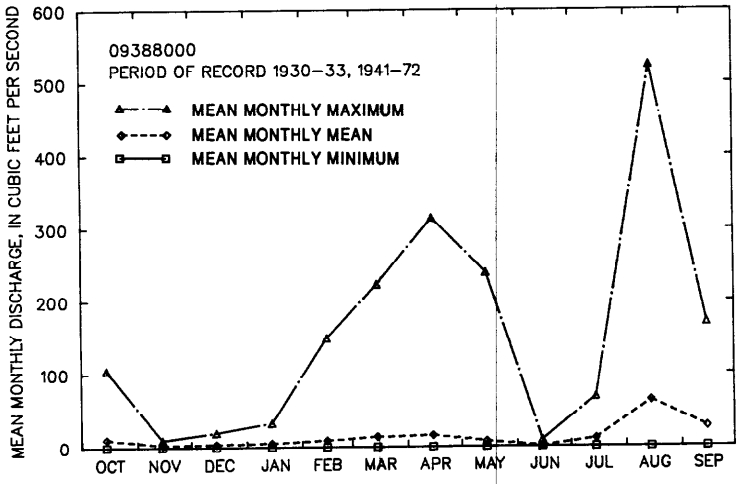
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
347	49	16	10	7.7	3.3	1.5	0.67	0.23	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09388000 LITTLE COLORADO RIVER NR HUNT, AZ--CONTINUED







09390500 SHOW LOW CREEK NEAR LAKESIDE, AZ

LOCATION.--Lat 34°10'46", long 109°59'14", in SW¼NW¼ sec.14, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on left bank 1 mi upstream from pumping plant on Show Low Lake, 1.9 mi northwest of Lakeside, 2.2 mi upstream from Jaques Dam, and 6 mi southeast of Show Low.

DRAINAGE AREA.--68.6 mi^2.

REMARKS.--Record shows inflow to Show Low Lake. Flow partly regulated by several small reservoirs, largest of which are Rainbow Lake and Scott Reservoir, combined capacity, 2,400 acre-ft. Diversions for irrigation of about 250 acres above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1954	03-23-54	2,040	UR	1972	12-26-71	5,450	UR
1955	08-27-55	273	UR	1973	05-05-73	1,400	UR
1956	07-31-56	103	UR	1974	03-21-74	60	UR
1957	02-09-57	56	UR	1975	03-09-75	405	UR
1958	03-22-58	867	UR	1976	04-20-76	632	UR
1959	08-28-59	45	UR	1977	04-08-77	35	UR
1960	03-08-60	487	UR	1978	03-01-78	2,750	UR
1961	04-01-61	27	UR	1979	12-18-78	5,550	UR
1962	02-13-62	930	UR	1980	02-15-80	1,860	UR
1963	02-22-63	64	UR	1981	03-30-81	31	UR
1964	04-10-64	30	UR	1982	03-13-82	575	UR
1965	01-07-65	2,430	UR	1983	03-30-83	442	UR
1966	12-30-65	3,880	UR	1984	10-02-83	683	UR
1967	08-02-67	42	UR	1985	12-27-84	5,430	UR
1968	02-25-68	345	UR	1986	02-16-86	345	UR
1969	03-19-69	395	UR	1987	03-09-87	500	UR
1970	04-21-70	30	UR	1988	08-31-88	890	UR
1971	08-10-71	219	UR	1989	02-27-89	92	UR

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
77.2	21.0	7,320	85.0	3.0	23.7	2.2	4.6

09390500 SHOW LOW CREEK NEAR LAKESIDE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1954-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	57	0.73	6.8	12	1.8	3.9
NOVEMBER	54	0.29	5.6	10	1.9	3.1
DECEMBER	285	0.20	25	61	2.4	14.1
JANUARY	60	0.10	10	14	1.4	5.7
FEBRUARY	225	0.19	30	45	1.5	16.9
MARCH	189	0.87	47	50	1.0	26.5
APRIL	197	0.97	22	36	1.6	12.5
MAY	72	1.7	7.5	12	1.5	4.2
JUNE	11	2.2	6.4	1.9	0.31	3.6
JULY	11	1.1	6.2	2.3	0.37	3.5
AUGUST	20	1.4	5.4	3.4	0.62	3.0
SEPTEMBER	19	1.3	5.2	3.2	0.61	2.9
ANNUAL	57	2.6	15	13	0.91	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.75	0.20	0.09	0.04	0.02	0.01
30	1.1	0.38	0.21	0.12	0.07	0.04
60	1.5	0.59	0.34	0.21	0.12	0.08
90	1.9	0.88	0.58	0.40	0.26	0.19
120	2.3	1.2	0.83	0.60	0.42	0.32
183	3.2	1.9	1.4	1.2	0.88	0.74

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1954-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
474	1,540	2,830	5,360	8,060	11,600

WEIGHTED SKEW (LOGS)= -0.09
MEAN (LOGS)= 2.66
STANDARD DEV. (LOGS)= 0.62

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1954-89

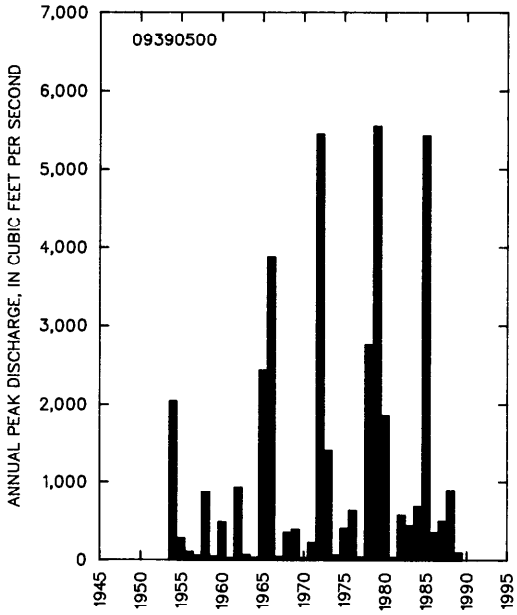
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	188	748	1,560	3,440	5,760	9,190
3	135	491	957	1,940	3,060	4,590
7	93	313	584	1,120	1,700	2,450
15	62	190	334	601	870	1,210
30	43	122	207	358	507	690
60	30	79	129	217	304	410
90	24	63	103	175	248	338

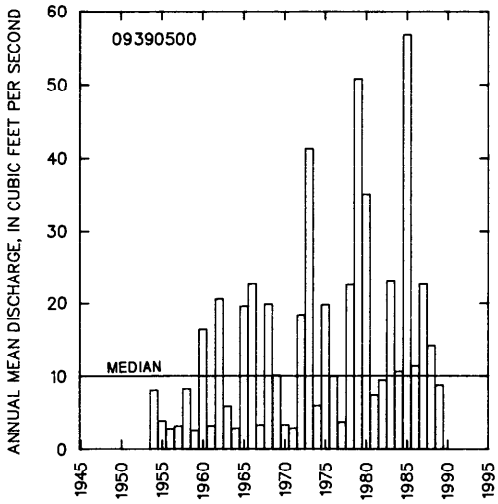
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-89

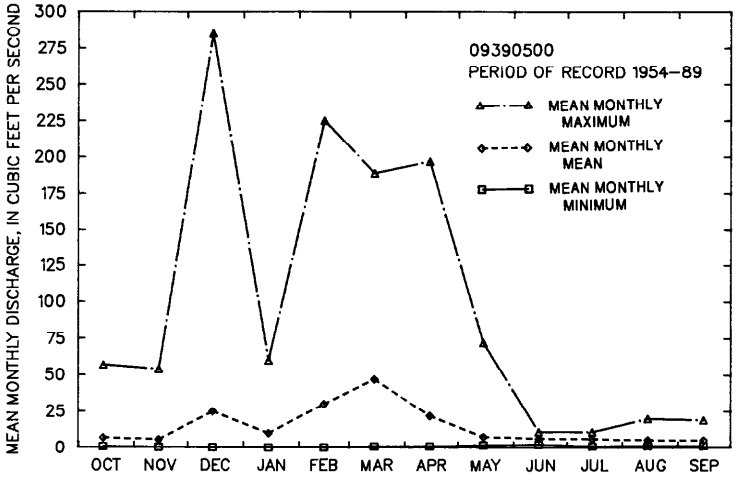
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
202	57	21	13	9.5	7.5	5.9	4.7	3.6	2.6	1.6	0.79	0.40	0.20	0.11	0.08	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09390500 SHOW LOW CREEK NEAR LAKESIDE, AZ--CONTINUED





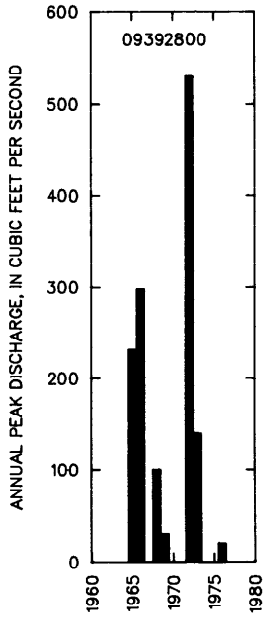


LITTLE COLORADO RIVER BASIN

09392800 LONG LAKE TRIBUTARY NEAR SHOW LOW, AZ

LOCATION.--Lat 34°15'40", long 109°59'41", in NW¼SE¼ sec.15, T.10 N., R.22 E., Navajo County, Hydrologic Unit 15020005, at U.S. Highway 60, 1 mi east of Show Low.

DRAINAGE AREA.--5.22 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	01/07/65	231	
1966	12/30/65	298	
1967	00/00/67	0	
1968	02/00/68	100	
1969	03/19/69	30	
1970	00/00/70	0	
1971	00/00/71	0	
1972	12/26/71	530	
1973	10/19/72	140	
1974	00/00/74	0	
1975	00/00/75	0	
1976	00/00/76	20	LT

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
23.4	195	524	1,380	2,460	4,030

WEIGHTED SKEW (LOGS)=	-0.49
MEAN (LOGS)=	1.27
STANDARD DEV. (LOGS)=	1.19

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
133	4.0	6,700	66.0	3.0	13.5	1.8	3.9

09393500 SILVER CREEK NEAR SNOWFLAKE, AZ

LOCATION.--Lat 34°40'00", long 110°02'30", in SW¼NW¼ sec.29, T.15 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on left bank 6 mi upstream from mouth and 11 mi north of Snowflake.

DRAINAGE AREA.--925 mi^2, of which 79 mi^2 is noncontributing.

REMARKS.--Diversions for irrigation above station of about 6,600 acres. Flow regulated by several reservoirs—combined capacity, about 13,700 acre-ft, excluding Lone Pine Reservoir, but including 6,176 acre-ft in Show Low Lake.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1920	12-05-19	25,000	ES,UR,HP	1960	12-25-59	2,120	UR
1929	07-21-29	[1]10,500	UR	1961	08-17-61	1,300	UR
1930	08-11-30	3,000	UR	1962	02-13-62	1,030	UR
1931	09-06-31	2,850	UR	1963	08-21-63	5,860	UR
1932	02-09-32	9,900	UR	1964	07-31-64	6,090	UR
1933	09-10-33	4,600	UR	1965	01-08-65	1,260	UR
1934	00-00-34	2,000	ES,UR	1966	12-30-65	6,800	UR
1935	09-27-35	2,820	UR	1967	07-29-67	4,070	UR
1936	07-25-36	4,300	UR	1968	08-05-68	3,890	UR
1937	02-07-37	4,300	UR	1969	07-24-69	3,150	UR
1938	08-08-38	3,100	UR	1970	09-06-70	1,690	UR
1939	08-29-39	1,460	UR	1971	09-30-71	4,470	UR
1940	07-26-40	11,000	UR	1972	12-26-71	4,780	UR
1941	03-15-41	3,700	UR	1973	10-20-72	3,260	UR
1942	10-03-41	932	UR	1974	09-22-74	558	UR
1943	08-31-43	3,120	UR	1975	10-29-74	990	UR
1944	08-25-44	416	UR	1976	02-10-76	2,540	UR
1945	08-11-45	3,230	UR	1977	08-04-77	1,840	UR
1946	09-19-46	1,680	UR	1978	03-01-78	4,160	UR
1949	01-13-49	2,900	UR	1979	12-19-78	7,700	UR
1950	07-07-50	1,160	UR	1980	02-20-80	4,460	UR
1951	08-28-51	3,780	UR	1981	07-15-81	907	UR
1952	01-19-52	10,100	UR	1982	08-12-82	5,090	UR
1953	07-16-53	1,060	UR	1983	09-29-83	1,510	UR
1954	09-02-54	7,670	UR	1984	08-23-84	3,160	UR
1955	08-06-55	4,980	UR	1985	12-27-84	5,840	UR
1956	06-29-56	3,620	UR	1986	08-28-86	409	UR
1957	08-05-57	1,910	UR	1987	08-06-87	1,820	UR
1958	09-08-58	4,340	UR	1988	02-03-88	737	UR
1959	07-05-59	630	UR	1989	07-23-89	1,020	UR

[1] Highest since 1923.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
35.0	53.3	6,400	53.0	3.0	16.7	1.8	3.8

09393500 SILVER CREEK NEAR SNOWFLAKE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1951-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	89	0.70	13	19	1.5	5.7
NOVEMBER	109	0.82	8.5	19	2.3	3.8
DECEMBER	276	1.0	25	55	2.2	11.2
JANUARY	457	0.88	27	78	2.9	12.3
FEBRUARY	468	0.57	28	77	2.8	12.6
MARCH	195	0.15	32	52	1.6	14.3
APRIL	212	0.20	11	34	3.1	5.1
MAY	71	0.96	4.9	11	2.3	2.2
JUNE	27	0.30	4.1	5.6	1.3	1.9
JULY	67	0.86	16	17	1.0	7.3
AUGUST	119	2.8	31	29	0.95	14.0
SEPTEMBER	173	0.59	21	33	1.5	9.5
ANNUAL	69	3.1	18	17	0.91	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1952-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.59	0.32	0.23	0.17	0.12	0.09
60	1.2	0.82	0.68	0.60	0.51	0.46
90	1.7	1.2	0.99	0.87	0.77	0.71
120	2.5	1.7	1.4	1.2	1.0	0.92
183	4.7	2.7	2.2	1.8	1.6	1.4

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1920, 1929-46, 1949-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,860	5,520	7,810	11,300	14,400	17,900

WEIGHTED SKEW (LOGS)= 0.04
MEAN (LOGS)= 3.46
STANDARD DEV. (LOGS)= 0.34

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1951-89

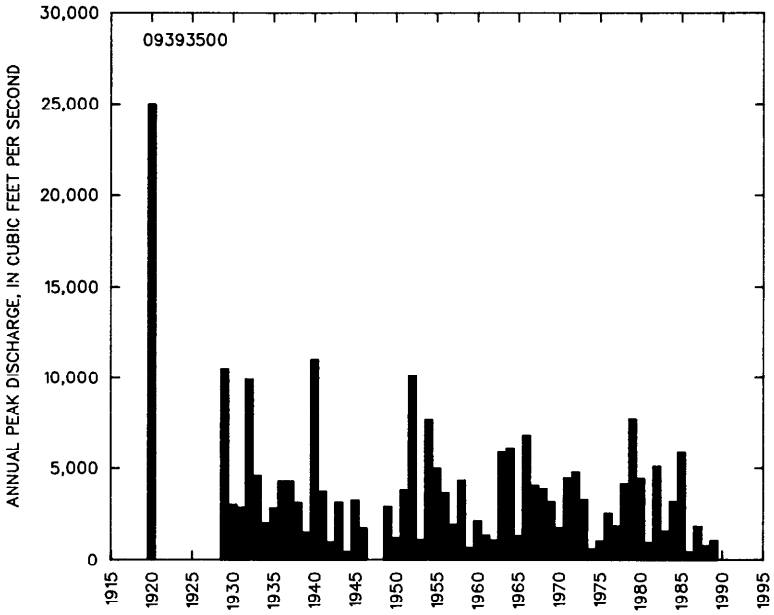
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	672	1,660	2,620	4,210	5,680	7,410
3	348	876	1,440	2,460	3,490	4,810
7	191	467	751	1,260	1,760	2,390
15	111	264	419	690	957	1,290
30	72	164	252	401	542	711
60	46	102	155	243	326	425
90	34	76	118	190	261	348

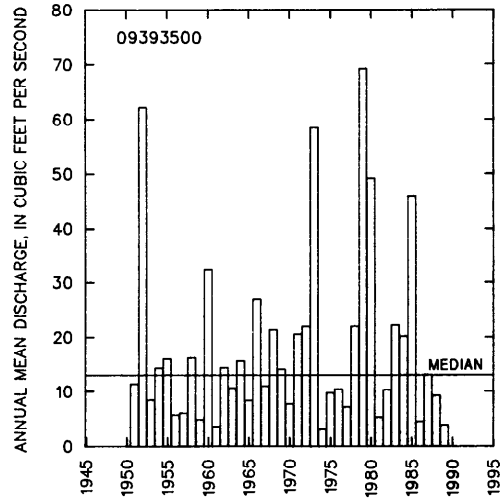
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1951-89

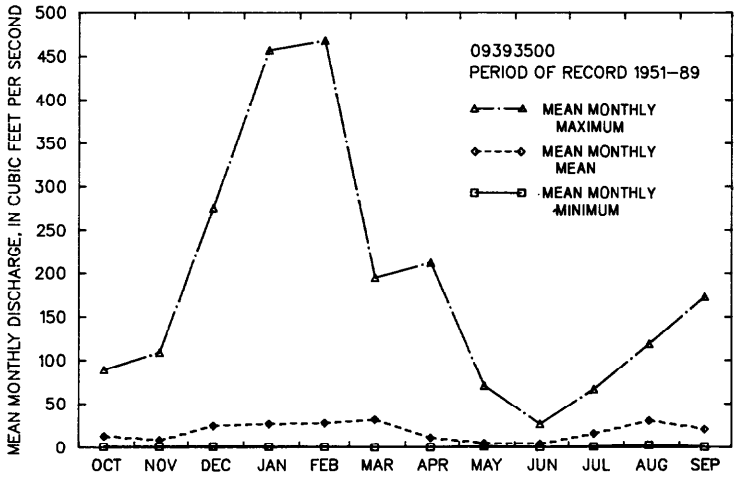
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
290	67	26	14	9.0	5.5	4.1	3.1	2.3	1.7	1.1	0.63	0.33	0.10	0.01	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09393500 SILVER CREEK NEAR SNOWFLAKE, AZ--CONTINUED







LITTLE COLORADO RIVER BASIN

09394500 LITTLE COLORADO RIVER AT WOODRUFF, AZ

LOCATION.--Lat 34°46'58", long 110°02'37", in NE¼SW¼ sec.17, T.16 N., R.22 E., Navajo County, Hydrologic Unit 15020002, on left bank at abandoned county road bridge in Woodruff, 3.7 mi downstream from Silver Creek.

DRAINAGE AREA.--8,072 mi^2, of which 297 mi^2 is noncontributing.

REMARKS.--Diversions above station for irrigation of about 22,000 acres including a pump installation 1,000 ft upstream installed in spring of 1973. Some regulation by reservoirs above station; combinad capacity, about 73,000 acre-ft, excluding Lone Pine Reservoir.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1917	04-18-17	2,800	HP	1958	08-22-58	3,950	UR
1919	07-19-19	4,600	HP	1959	08-19-59	566	UR
1920	12-05-19	[1]25,000	HP	1960	10-30-59	4,750	UR
1929	07-21-29	10,700	UR	1961	08-17-61	1,420	UR
1930	08-11-30	8,000	UR	1962	02-13-62	996	UR
1931	08-07-31	7,750	UR	1963	08-22-63	6,330	UR
1932	02-10-32	10,200	UR	1964	07-31-64	4,750	UR
1933	09-11-33	8,300	UR	1965	09-04-65	3,390	UR
1934	00-00-34	2,500	ES,UR	1966	12-30-65	5,320	UR
1935	09-28-35	5,400	UR	1967	07-24-67	4,540	UR
1936	07-25-36	8,300	UR	1968	07-25-68	3,990	UR
1937	02-07-37	5,640	UR	1969	07-24-69	3,270	UR
1938	08-08-38	2,960	UR	1970	09-06-70	3,070	UR
1939	08-06-39	1,180	UR	1971	09-30-71	7,220	UR
1940	07-26-40	13,000	UR	1972	12-27-71	3,700	UR
1941	03-15-41	6,050	UR	1973	10-20-72	4,870	UR
1942	10-03-41	1,670	UR	1974	09-22-74	2,020	UR
1943	08-31-43	3,590	UR	1975	10-29-74	2,800	UR
1944	09-28-44	1,140	UR	1976	07-23-76	2,460	UR
1945	07-23-45	4,690	UR	1977	08-04-77	1,220	UR
1946	09-19-46	3,880	UR	1978	03-02-78	4,470	UR
1947	08-29-47	4,560	UR	1979	12-19-78	9,320	UR
1948	10-14-47	4,560	UR	1980	02-20-80	5,300	UR
1949	08-08-49	7,540	UR	1981	07-16-81	2,050	UR
1950	07-19-50	2,050	UR	1982	08-12-82	6,600	UR
1951	08-28-51	8,290	UR	1983	09-30-83	2,860	UR
1952	01-19-52	10,200	UR	1984	09-26-84	6,420	UR
1953	07-29-53	2,770	UR	1985	12-28-84	6,780	UR
1954	09-02-54	5,230	UR	1986	07-04-86	1,420	UR
1955	08-06-55	6,630	UR	1987	08-07-87	1,940	UR
1956	06-30-56	2,250	UR	1988	10-12-87	1,930	UR
1957	08-06-57	4,100	UR	1989	07-23-89	1,610	UR

[1]Highest since 1917.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
25.2	122	6,810	28.0	2.9	13.4	1.5	3.0

09394500 LITTLE COLORADO RIVER AT WOODRUFF, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1906, 1930-33, 1936-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	301	1.0	43	66	1.5	6.8
NOVEMBER	543	3.0	26	75	2.9	4.2
DECEMBER	349	2.3	28	55	1.9	4.6
JANUARY	488	3.8	36	71	2.0	5.7
FEBRUARY	827	2.6	56	127	2.3	9.0
MARCH	610	2.7	76	126	1.7	12.2
APRIL	414	0.00	45	91	2.0	7.2
MAY	488	0.00	24	72	3.1	3.8
JUNE	88	0.00	7.4	13	1.8	1.2
JULY	238	0.53	62	60	0.98	9.9
AUGUST	951	3.6	143	163	1.2	22.8
SEPTEMBER	611	0.71	78	106	1.3	12.5
ANNUAL	161	9.6	52	39	0.74	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1907, 1931-33, 1937-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	8.1	4.9	3.9	3.4	2.9	2.6
183	15	7.9	6.0	5.0	4.1	3.6

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1917, 1919-20, 1929-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,180	6,970	9,160	12,300	15,100	17,900

WEIGHTED SKEW (LOGS)= 0.12
MEAN (LOGS)= 3.62
STANDARD DEV. (LOGS)= 0.26

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1906, 1930-33, 1936-89

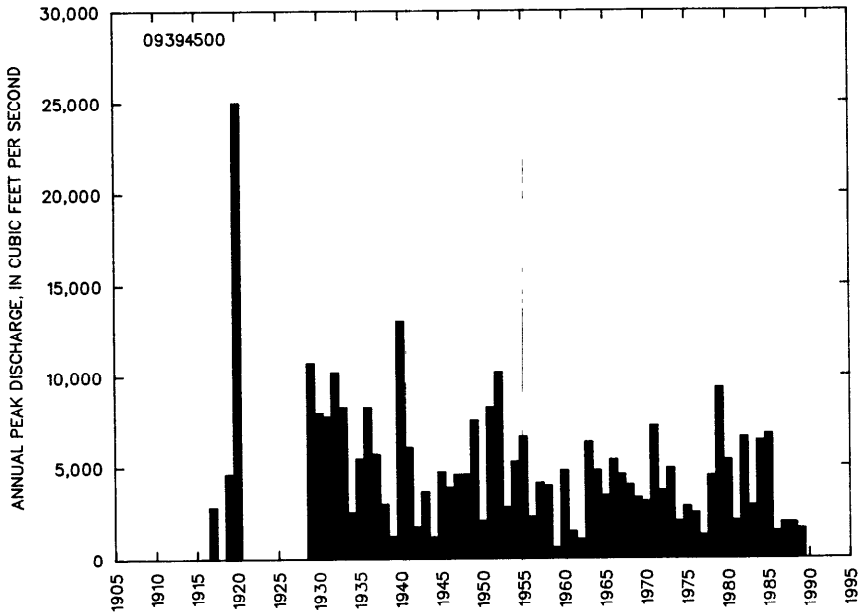
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,870	3,630	4,940	6,690	8,030	9,370
3	1,040	2,080	2,890	4,000	4,880	5,790
7	581	1,120	1,530	2,080	2,490	2,910
15	348	659	892	1,200	1,450	1,690
30	227	432	591	813	991	1,180
60	149	291	405	568	701	842
90	111	219	308	436	543	658

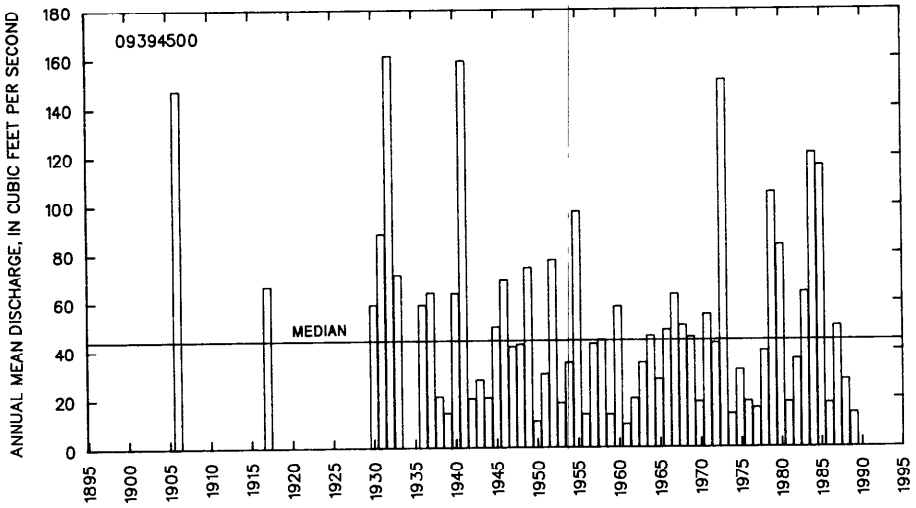
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906, 1930-33, 1936-89

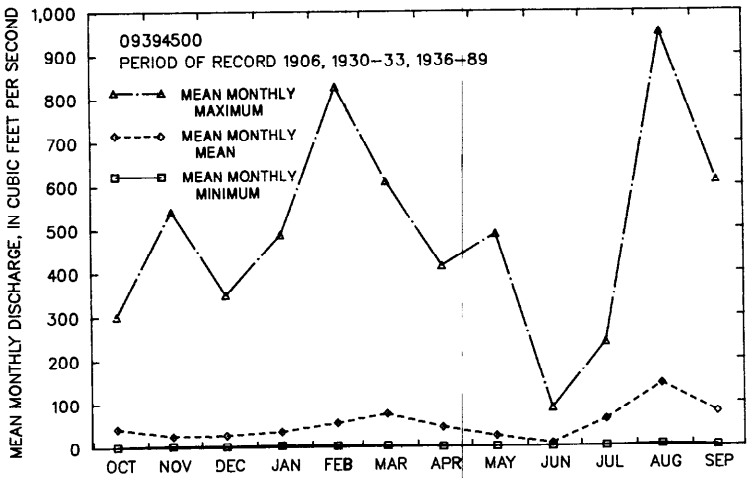
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
812	235	102	53	33	16	11	7.6	5.9	4.6	3.2	1.2	0.22	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09394500 LITTLE COLORADO RIVER AT WOODRUFF, AZ--CONTINUED







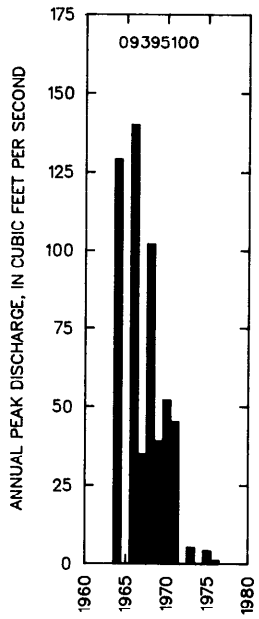
09395100 CARR LAKE DRAW TRIBUTARY NEAR HOLBROOK, AZ

LOCATION.--Lat 34°50'05", long 109°56'00", in SE¼SE¼ sec.30, T.17 N., R.23 E., Navajo County, Hydrologic Unit 15020002, at (former) U.S. Highway 180, 14 mi southeast of Holbrook.

DRAINAGE AREA.--1.28 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1964	07-28-64	129
1965	00-00-65	0
1966	08-12-66	140
1967	00-00-67	35
1968	08-00-68	102
1969	09-05-69	39
1970	09-06-70	52
1971	09-29-71	45
1972	00-00-72	0
1973	00-00-73	5.0
1974	00-00-74	0
1975	10-29-74	4.0
1976	09-00-76	1.0



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
27	73.8	120	196	266	345

WEIGHTED SKEW (LOGS)=	-0.34
MEAN (LOGS)=	1.40
STANDARD DEV. (LOGS)=	0.55

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
103	2.4	5,420	0.0	3.0	7.8	1.3	2.9

09395200 DECKER WASH NEAR SNOWFLAKE, AZ

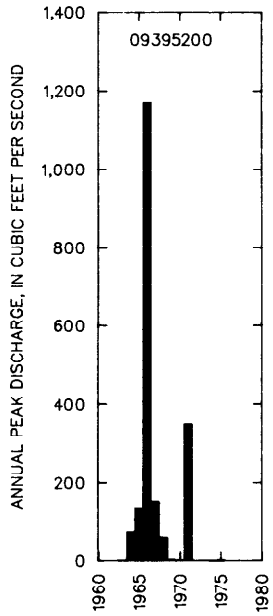
LOCATION.--Lat 34°27'40", long 110°24'15", in SW¼ sec.2, T.12 N., R.18 E., Navajo County, Hydrologic Unit 15020008, at State Highway 277, 19 mi west of Snowflake.

DRAINAGE AREA.--16.5 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-31-63	0.5	
1964	08-02-64	74	
1965	01-07-65	135	
1966	12-30-65	1,170	
1967	08-00-67	152	
1968	02-00-68	60	
1969	08-00-69	2.0	LT
1970	00-00-70	0.5	ES
1971	08-04-71	349	
1972	12-26-71	([1])	
1973	10-19-72	([1])	
1974	00-00-74	0	
1975	09-00-75	1.5	ES
1976	02-09-76	([1])	

[1]Discharge unknown.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
31.1	14.9	6,660	97.0	3.0	20.0	1.9	3.6

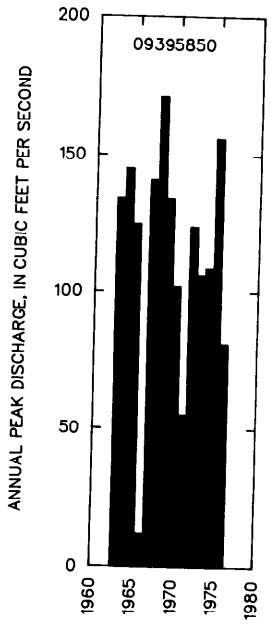
09395850 BLACK CREEK TRIBUTARY NEAR WINDOW ROCK, AZ

LOCATION.--Lat 35°39'15", long 109°05'20", in SE¼ sec.13, T.26 N., R.30 E., Apache County, Hydrologic Unit 15020006, at Navajo Highway 21, 0.2 mi south of State Highway 264, and 2.75 mi southwest of Window Rock.

DRAINAGE AREA.--0.33 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-30-63	134
1964	08-13-64	145
1965	07-27-65	125
1966	08-01-66	12
1967	08-00-67	141
1968	08-06-68	171
1969	08-00-69	134
1970	08-07-70	102
1971	08-27-71	55
1972	09-00-72	124
1973	08-00-73	106
1974	08-05-74	109
1975	07-11-75	156
1976	00-00-76	81



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
53.3	0.75	6,830	0.0	1.0	14.1	1.2	2.6

09395900 BLACK CREEK NEAR LUPTON, AZ

LOCATION.--Lat 35°27'09", long 109°07'30", in SE¼NE¼ sec.26, T.24 N., R.30 E., Apache County, Hydrologic Unit 15020006, in Navajo Indian Reservation, on downstream end of center bridge pier on State Highway 166, 7 mi upstream from West Fork, and 8 mi northwest of Lupton, and 16 mi south of Window Rock.

DRAINAGE AREA.--494 mi^2, of which 0.56 mi^2 is noncontributing.

REMARKS.--Red Lake, near headwaters 35 mi upstream, was built in 1954, with capacity of 9,700 acre-ft, but silting may have reduced this amount.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1964	08-01-64	5,470
1965	07-29-65	3,370
1966	09-15-66	2,860
1967	07-16-67	1,630
1968	08-06-68	3,750
1969	07-19-69	4,280
1970	09-06-70	3,720
1971	09-29-71	3,090
1972	08-26-72	3,160
1973	10-07-72	2,420
1974	08-05-74	1,600
1975	09-08-75	865
1976	07-27-76	830
1977	08-17-77	7,160
1978	03-01-78	72
1979	01-17-79	1,340
1980	02-20-80	1,740
1981	07-15-81	2,220
1982	08-25-82	7,680

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
11.2	47.6	7,500	50.0	2.0	15.8	1.4	2.6

09395900 BLACK CREEK NEAR LUPTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1965-72, 1975-78, 1980-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	12	0.00	2.5	4.4	1.7	2.6
NOVEMBER	4.8	0.00	0.86	1.2	1.4	0.9
DECEMBER	11	0.02	1.8	2.8	1.6	1.9
JANUARY	13	0.03	2.5	3.3	1.3	2.6
FEBRUARY	75	0.18	12	22	1.8	12.6
MARCH	27	0.00	8.3	9.2	1.1	8.6
APRIL	57	0.00	8.0	16	2.0	8.3
MAY	14	0.00	1.6	3.4	2.2	1.7
JUNE	9.4	0.00	0.71	2.4	3.4	0.7
JULY	81	0.03	15	21	1.4	15.8
AUGUST	124	0.23	29	34	1.2	29.9
SEPTEMBER	53	0.00	14	16	1.1	14.5
ANNUAL	19	0.71	8.0	5.7	0.70	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-72, 1976-78, 1981-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.08	0.02	0.01	0.00	0.00	0.00
120	0.35	0.10	0.05	0.03	0.01	0.01
183	1.3	0.50	0.29	0.18	0.11	0.07

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1964-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
2,550	4,440	5,880	7,880	9,480	11,200

WEIGHTED SKEW (LOGS)= -0.15
MEAN (LOGS)= 3.40
STANDARD DEV. (LOGS)= 0.29

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1965-72, 1975-78, 1980-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	455	912	1,190	1,490	1,670	1,810
3	224	477	668	917	1,100	1,280
7	123	254	348	463	545	620
15	69	140	189	249	291	330
30	41	83	115	155	185	214
60	26	54	74	100	119	136
90	19	39	53	70	82	94

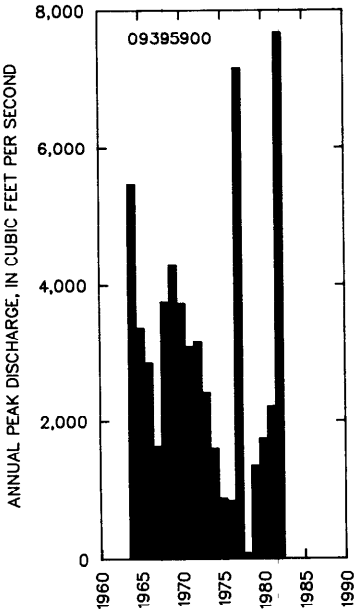
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1965-72, 1975-78, 1980-82

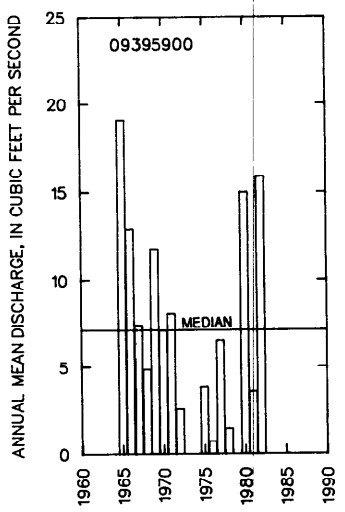
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

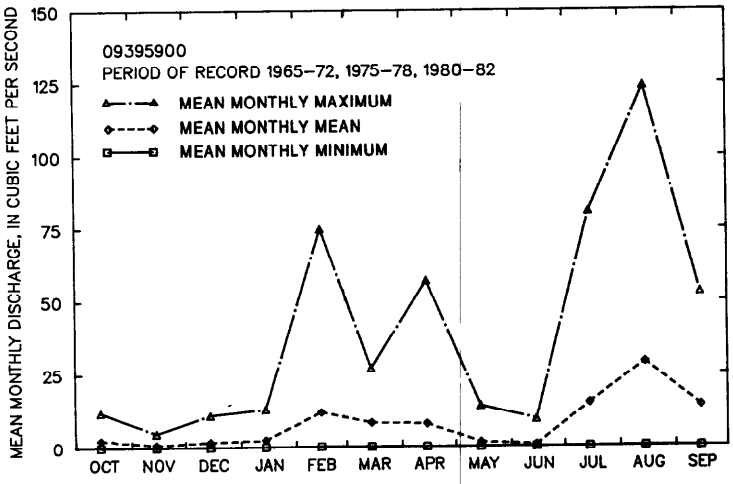
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
156	32	11	5.0	3.4	1.3	0.52	0.21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09395900 BLACK CREEK NEAR LUPTON, AZ--CONTINUED



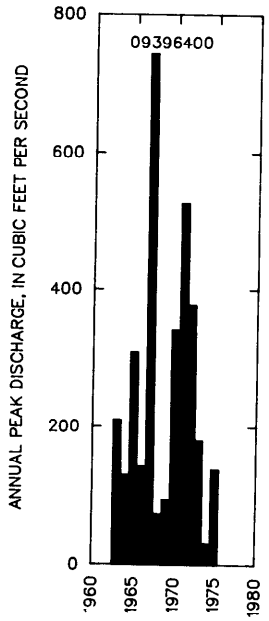




09396400 DEAD WASH TRIBUTARY NEAR HOLBROOK, AZ

LOCATION.--Lat 35°04'20", long 109°44'56", in S½ sec.1, T.19 N., R.24 E., Apache County, Hydrologic Unit 15020007, at U.S. Highway 66, near east edge of Petrified Forest National Monument, and 26 mi northeast of Holbrook.

DRAINAGE AREA.--1.22 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-00-63	210	
1964	08-12-64	130	
1965	09-04-65	307	
1966	12-21-65	142	
1967	08-00-67	743	
1968	03-00-68	73	
1969	10-03-68	94	
1970	09-05-70	340	
1971	08-23-71	526	
1972	09-09-72	377	
1973	10-19-72	180	
1974	07-00-74	30	ES
1975	10-29-74	138	

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
198	374	522	745	938	1,150

WEIGHTED SKEW (LOGS)= 0.01
MEAN (LOGS)= 2.30
STANDARD DEV. (LOGS)= 0.33

† Reliability of values in column is uncertain, and potential errors are large.

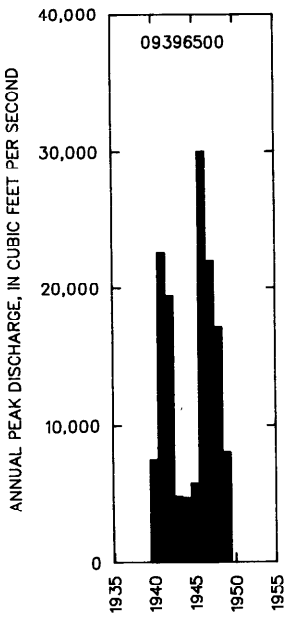
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
60.0	1.8	5,740	0.0	3.0	7.9	1.3	2.6

09396500 PUERCO RIVER NEAR ADAMANA, AZ

LOCATION.--Lat 34°58'45", long 109°47'40", in NE¼ sec.9, T.18 N., R.24 E., Apache County, Hydrologic Unit 15020007, at highway bridge in Petrified Forest National Monument, 0.25 mi downstream from Dead Wash and 1.5 mi east of Adamana.

DRAINAGE AREA.--2,654 mi^2, of which 50.5 mi^2 is noncontributing.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1940	08-23-40	7,500
1941	09-29-41	22,600
1942	10-04-41	19,400
1943	09-26-43	4,800
1944	09-26-44	4,700
1945	02-03-45	5,740
1946	08-12-46	30,000
1947	08-10-47	22,000
1948	10-14-47	17,100
1949	08-08-49	8,040

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-49

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
11,500	20,900	28,400	39,200	48,200	57,900

WEIGHTED SKEW (LOGS)= -0.08
MEAN (LOGS)= 4.06
STANDARD DEV. (LOGS)= 0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
15.7	115	6,730	29.0	2.8	12.6	1.4	2.7

LITTLE COLORADO RIVER BASIN

09397000 LITTLE COLORADO RIVER AT HOLBROOK, AZ

LOCATION.--Lat 34°53'52", long 110°09'45", in SW¼SW¼ sec.6, T.17 N., R.21 E., Navajo County, Hydrologic Unit 15020008, near right bank on downstream side of bridge on U.S. Highway 180 at Holbrook, 2.3 mi downstream from Puerco River.

DRAINAGE AREA.--11,462 mi^2, of which 347 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1906	11-27-05	20,200	HP
1923	09-19-23	[1]60,000	HP
1950	07-19-50	2,960	
1951	08-28-51	8,700	
1952	01-19-52	8,400	
1953	07-29-53	6,030	
1954	07-22-54	10,800	
1955	08-17-55	10,500	
1956	06-30-56	4,210	
1957	08-05-57	21,800	
1958	09-14-58	7,000	
1959	08-06-59	6,300	
1960	10-29-59	11,400	
1961	08-16-61	4,160	
1962	10-31-61	4,010	
1963	08-31-63	9,370	
1964	09-09-64	15,100	
1965	07-25-65	14,800	
1966	08-13-66	10,400	
1967	08-12-67	14,100	
1968	08-12-68	21,000	
1969	10-04-68	24,200	
1970	09-06-70	19,700	
1971	08-21-71	13,200	
1972	10-01-71	20,300	
1973	10-20-72	15,000	

[1]Highest since 1870.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
21.9	134	6,730	27.0	2.8	13.0	1.4	2.9

09397000 LITTLE COLORADO RIVER AT HOLBROOK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1906, 1950-73

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	939	2.4	138	231	1.7	8.7
NOVEMBER	1,160	4.4	75	229	3.1	4.7
DECEMBER	529	3.9	51	110	2.1	3.2
JANUARY	565	3.2	105	178	1.7	6.6
FEBRUARY	312	2.8	58	81	1.4	3.6
MARCH	1,270	3.4	112	272	2.4	7.1
APRIL	1,020	2.3	64	206	3.2	4.1
MAY	600	1.3	32	119	3.7	2.0
JUNE	161	0.37	19	33	1.8	1.2
JULY	638	2.4	157	190	1.2	9.9
AUGUST	2,130	4.5	537	606	1.1	33.8
SEPTEMBER	1,000	2.3	240	285	1.2	15.1
ANNUAL	350	20	133	87	0.65	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1906-07, 1951-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.38	0.07	0.00	0.00	0.00	0.00
3	0.61	0.16	0.04	0.00	0.00	0.00
7	1.1	0.35	0.15	0.04	0.00	0.00
14	1.7	0.75	0.44	0.28	0.15	0.10
30	2.4	1.0	0.68	0.47	0.31	0.23
60	3.0	1.8	1.5	1.3	1.2	1.1
90	5.1	2.6	1.9	1.5	1.2	1.1
120	10	5.0	3.8	3.1	2.6	2.3
183	28	12	7.9	5.7	4.1	3.2

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1906, 1923, 1950-73

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
11,000	17,000	21,400	27,400	32,100	37,200

WEIGHTED SKEW (LOGS)= 0.06
MEAN (LOGS)= 4.05
STANDARD DEV. (LOGS)= 0.22

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1906, 1950-73

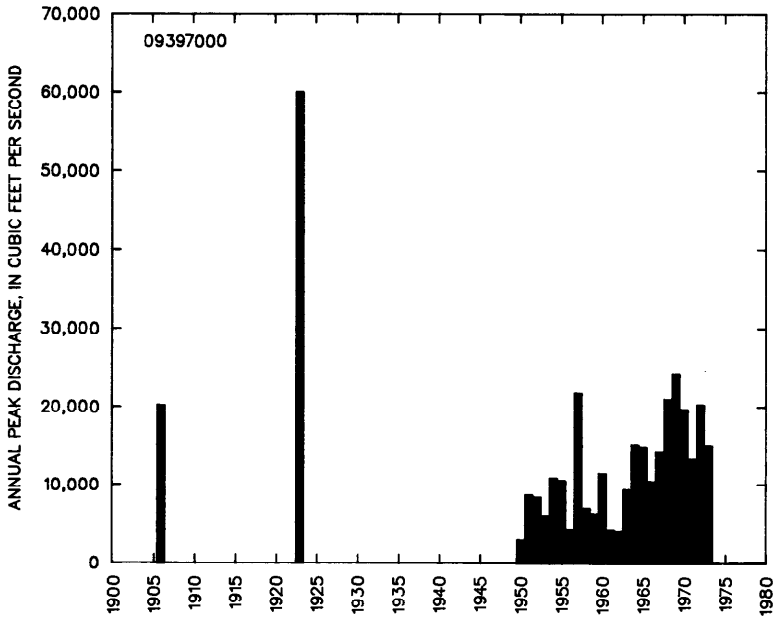
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	5,460	10,600	14,600	19,800	23,900	28,000
3	3,290	6,030	7,820	9,940	11,400	12,700
7	1,850	3,350	4,320	5,440	6,180	6,850
15	1,110	2,030	2,670	3,480	4,070	4,640
30	717	1,310	1,720	2,230	2,610	2,960
60	457	875	1,180	1,580	1,890	2,190
90	329	625	841	1,120	1,340	1,540

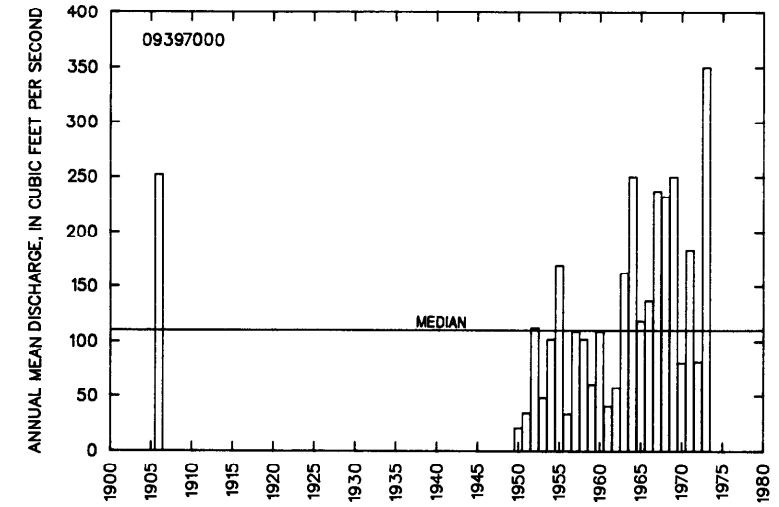
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906, 1950-73

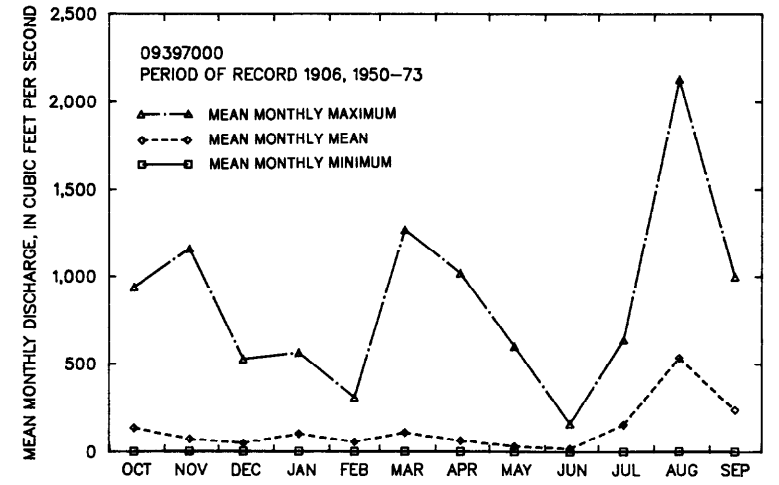
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,460	588	191	93	49	19	12	9.2	7.1	5.3	3.7	2.2	1.3	0.70	0.41	0.18	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09397000 LITTLE COLORADO RIVER AT HOLBROOK, AZ--CONTINUED







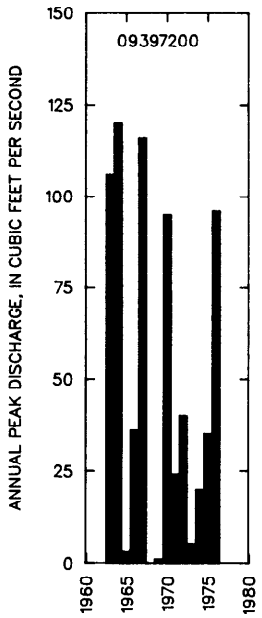
09397200 PENZANCE WASH NEAR JOSEPH CITY, AZ

LOCATION.--Lat 34°55'08", long 110°15'13", in NE¼ sec.31, T.18 N., R.20 E., Navajo County, Hydrologic Unit 15020008, at U.S. Highway 66, 5.6 mi southeast of Joseph City.

DRAINAGE AREA.--0.17 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-30-63	106	
1964	09-09-64	120	
1965	00-00-65	3.0	ES
1966	08-09-66	36	
1967	08-05-67	116	
1968	00-00-68	0	
1969	07-24-69	1.0	LT
1970	09-06-70	95	
1971	09-02-71	24	
1972	08-13-72	40	
1973	10-19-72	5.0	
1974	08-00-74	20	ES
1975	09-00-75	35	
1976	00-00-76	96	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
38	85.4	126	188	240	296

WEIGHTED SKEW (LOGS)= -0.33
MEAN (LOGS)= 1.56
STANDARD DEV. (LOGS)= 0.44

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
237	0.45	5,150	0.0	3.0	7.8	1.2	2.6

09397500 CHEVELON CREEK BELOW WILDCAT CANYON, NEAR WINSLOW, AZ

LOCATION.--Lat 34°38'11", long 110°42'49", in SW¼ sec.36, T.15 N., R.15 E., Navajo County, Hydrologic Unit 15020010, on right bank 0.4 mi downstream from Wildcat Canyon and 25 mi south of Winslow.

DRAINAGE AREA.--271 mi^2.

REMARKS.--Storage and regulation by Chevelon Canyon Lake (capacity, 6,193 acre-ft) 17 mi upstream since June 1967. No diversion above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1948	04-12-48	931		1964	04-12-64	1,240	
1949	04-14-49	1,290		1965	01-07-65	9,100	
1950	02-28-50	726		1966	12-30-65	9,560	
1951	08-29-51	8,940		1967	12-07-66	9,920	
1952	01-18-52	19,800		1968	04-02-68	1,600	UR
1953	03-11-53	653		1969	01-26-69	6,340	UR
1954	03-23-54	7,500		1970	09-05-70	11,100	UR
1955	08-23-55	631		1979	12-18-78	[1]19,900	HP
1956	03-06-56	227		1982	03-12-82	6,440	
1957	01-09-57	11,300		1983	04-01-83	1,950	
1958	09-28-58	4,080		1984	12-27-83	2,360	
1959	10-06-58	479		1985	12-28-84	5,250	
1960	12-25-59	2,630		1986	11-26-85	3,490	
1961	04-04-61	476		1987	03-14-87	417	
1962	02-13-62	1,920		1988	02-27-88	1,170	
1963	08-27-63	950		1989	03-10-89	525	

[1]Highest since 1929.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
54.4	39.2	7,030	99.0	3.0	24.0	2.5	4.6

09397500 CHEVELON CREEK BELOW WILDCAT CANYON, NEAR WINSLOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1948-70

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	46	0.00	2.7	9.7	3.5	0.5
NOVEMBER	108	0.00	9.2	24	2.7	1.5
DECEMBER	320	0.00	46	88	1.9	7.8
JANUARY	523	0.00	96	172	1.8	16.1
FEBRUARY	308	0.00	64	80	1.3	10.7
MARCH	473	31	164	119	0.73	27.6
APRIL	658	5.3	166	182	1.1	27.9
MAY	47	0.00	11	16	1.4	1.9
JUNE	1.7	0.00	0.09	0.35	3.9	0.0
JULY	4.4	0.00	0.29	1.0	3.4	0.0
AUGUST	205	0.00	18	47	2.7	2.9
SEPTEMBER	210	0.00	19	51	2.7	3.2
ANNUAL	132	13	50	33	0.66	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1949-70

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.22	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1948-67, 1968-70, 1979, 1982-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,360	6,680	11,500	20,300	29,400	41,000

WEIGHTED SKEW (LOGS)= -0.03
MEAN (LOGS)= 3.37
STANDARD DEV. (LOGS)= 0.54

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1948-70

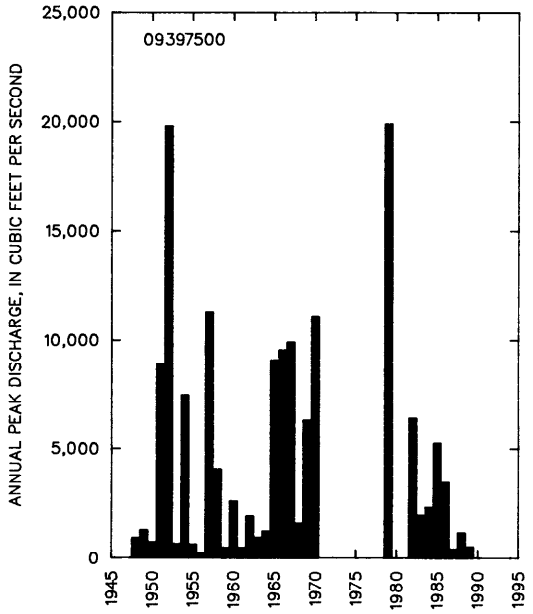
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,400	3,640	5,980	10,100	14,200	19,300
3	979	2,170	3,230	4,870	6,310	7,930
7	670	1,250	1,640	2,120	2,460	2,770
15	448	741	912	1,100	1,210	1,310
30	297	480	591	716	798	870
60	175	303	395	516	607	700
90	131	239	320	430	517	607

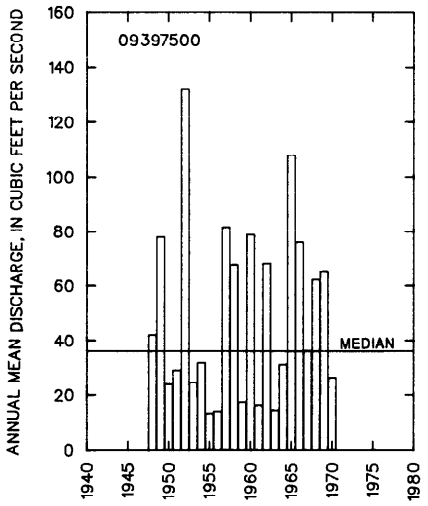
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-70

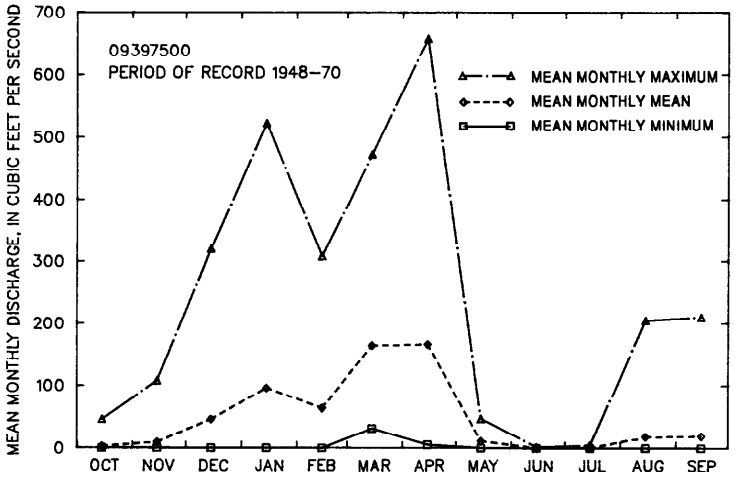
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
774	253	106	65	37	8.4	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09397500 CHEVELON CREEK BELOW WILDCAT CANYON, NEAR WINSLOW, AZ--CONTINUED







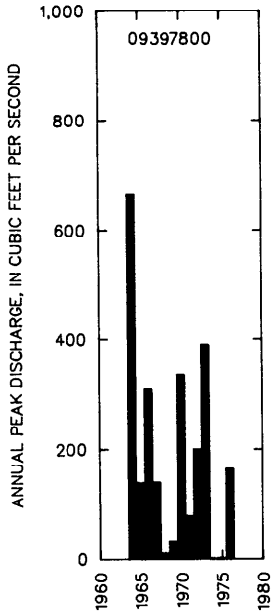
09397800 BROOKBANK CANYON NEAR HEBER, AZ

LOCATION.--Lat 34°28'20", long 110°38'50", in SE¼ sec.33, T.13 N., R.16 E., Navajo County, Hydrologic Unit 15020010, at Heber-Winslow Road, 4 miles northwest of Heber.

DRAINAGE AREA.--27.9 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-00-64	666	
1965	01-07-65	139	
1966	12-30-65	310	
1967	12-07-66	140	
1968	02-00-68	10	
1969	03-00-69	32	
1970	09-05-70	335	
1971	09-29-71	78	
1972	07-16-72	200	
1973	10-19-72	390	
1974	07-15-74	1.0	LT
1975	08-11-75	2.0	ES
1976	02-09-76	165	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
147	315	460	679	866	1,070

WEIGHTED SKEW (LOGS)= -0.23
MEAN (LOGS)= 2.15
STANDARD DEV. (LOGS)= 0.41

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
65.5	11.6	6,950	99.0	3.0	22.1	2.3	5.0

09398000 CHEVELON CREEK NEAR WINSLOW, AZ

LOCATION.--Lat 34°55'35", long 110°31'51", in SE¼SW¼ sec.27, T.18 N., R.17 E., Navajo County, Hydrologic Unit 15020010, on right bank 3 mi upstream from mouth and 12 mi southeast of Winslow.

DRAINAGE AREA.--785 mi^2, of which 3.9 mi^2 is noncontributing.

REMARKS.--Storage and regulation by Chevelon Canyon Lake (capacity, 6,193 acre-ft) 57 mi upstream since June 1967. No known diversion above station. Chevelon Canal diverts 2 mi downstream from station for irrigation.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-19-16	9,500		1950	03-01-50	616	
1917	04-24-17	1,300		1951	08-30-51	7,200	
1918	03-13-18	6,200		1952	01-19-52	25,300	
1919	04-01-19	1,110		1953	03-12-53	650	
1920	12-05-19	9,000		1954	03-23-54	5,730	
1929	04-04-29	16,100		1955	06-13-55	1,800	
1930	03-27-30	519		1956	07-23-56	562	
1931	03-19-31	548		1957	01-09-57	8,680	
1932	02-10-32	3,100		1958	09-28-58	2,140	
1933	09-20-33	1,060		1959	08-14-59	1,320	
1934	00-00-34	2,700		1960	12-26-59	2,640	
1936	04-12-36	1,350		1961	07-30-61	500	
1937	02-08-37	1,820		1962	02-13-62	1,540	
1938	03-04-38	9,400		1963	08-21-63	1,620	
1939	08-03-39	2,410		1964	08-01-64	1,680	
1940	07-25-40	1,180		1965	01-08-65	13,100	
1941	03-15-41	1,630		1966	12-31-65	13,300	
1942	04-06-42	985		1967	12-07-66	8,890	
1943	03-11-43	1,330		1968	04-02-68	1,640	UR
1944	04-06-44	1,180		1969	01-26-69	5,120	UR
1945	08-04-45	2,620		1970	09-06-70	8,020	UR
1946	09-20-46	892		1971	08-24-71	4,150	UR
1947	08-04-47	2,460		1972	12-27-71	9,040	UR
1948	04-13-48	825		1979	12-18-78	[1]33,600	UR,HP
1949	04-14-49	1,150					

[1]Highest since 1923.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
27.7	77.1	6,440	70.0	3.0	18.4	2.1	4.2

09398000 CHEVELON CREEK NEAR WINSLOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1917-19, 1930-33, 1936-72

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	247	3.1	12	37	3.1	2.0
NOVEMBER	137	2.7	14	26	1.9	2.3
DECEMBER	347	2.8	37	76	2.1	6.1
JANUARY	663	2.6	58	135	2.3	9.6
FEBRUARY	338	2.7	64	89	1.4	10.6
MARCH	527	3.5	171	138	0.80	28.2
APRIL	733	3.9	181	188	1.0	29.9
MAY	211	2.2	23	39	1.7	3.7
JUNE	21	2.1	5.1	3.1	0.61	0.8
JULY	25	3.0	7.1	4.1	0.57	1.2
AUGUST	171	2.9	18	32	1.8	3.0
SEPTEMBER	182	2.5	15	31	2.0	2.5
ANNUAL	145	7.7	50	32	0.63	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1918-19, 1930-33, 1937-72

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	2.1	1.5	1.2	0.94	0.72	0.60
3	2.3	1.7	1.4	1.2	0.95	0.82
7	2.6	2.0	1.7	1.5	1.3	1.2
14	2.8	2.3	2.0	1.9	1.7	1.5
30	3.2	2.7	2.5	2.3	2.1	2.0
60	3.7	3.2	2.9	2.7	2.5	2.3
90	4.0	3.3	3.0	2.8	2.5	2.4
120	4.1	3.5	3.4	3.3	3.3	3.3
183	5.1	3.9	3.6	3.4	3.3	3.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916-20, 1929-34, 1936-67, 1968-72

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,360	5,860	9,670	16,800	24,200	33,800

WEIGHTED SKEW (LOGS)= 0.24
MEAN (LOGS)= 3.39
STANDARD DEV. (LOGS)= 0.46

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1917-19, 1930-33, 1936-72

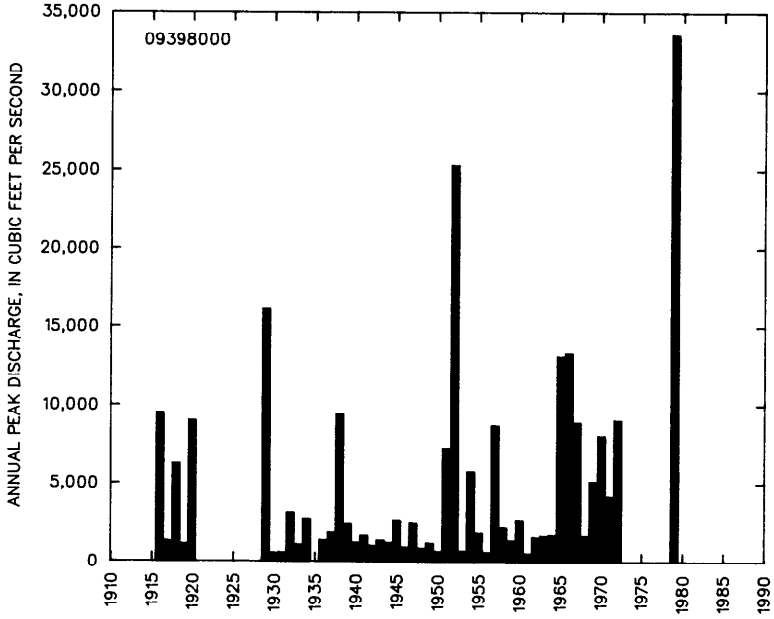
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,040	2,430	3,950	6,880	10,000	14,300
3	830	1,650	2,370	3,490	4,480	5,630
7	629	1,090	1,390	1,760	2,010	2,260
15	449	703	843	989	1,080	1,150
30	304	479	575	674	734	783
60	188	317	401	502	572	637
90	140	246	319	411	478	543

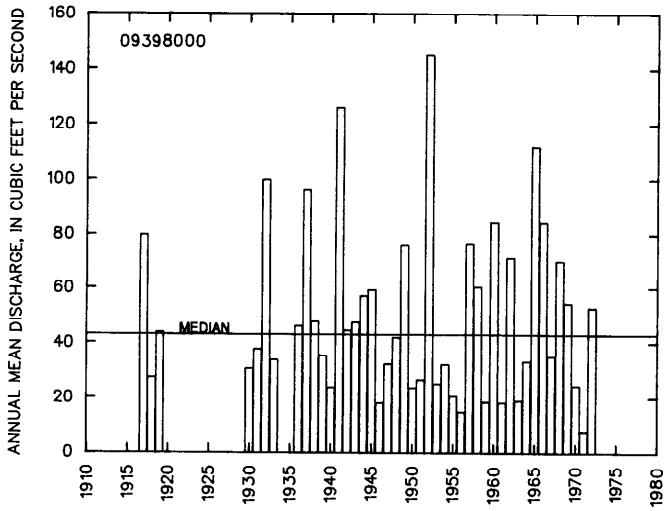
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1917-19, 1930-33, 1936-72

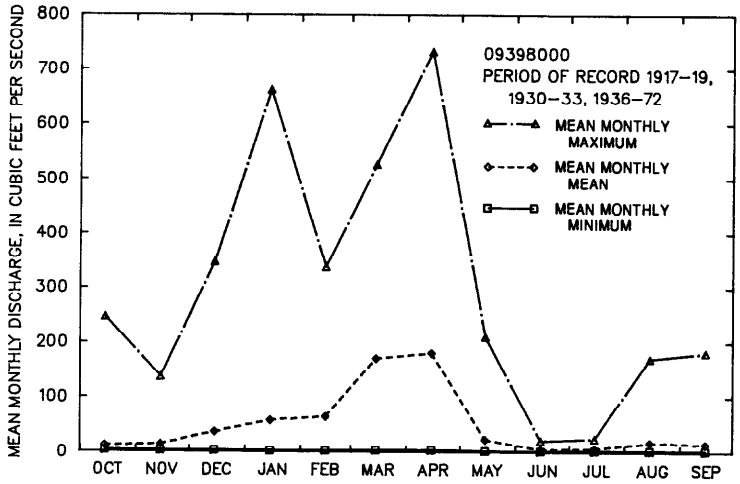
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
768	267	113	60	33	9.0	5.6	5.1	4.7	4.3	3.8	3.3	3.0	2.1	1.8	1.7	1.1

† Reliability of values in column is uncertain, and potential errors are large.

09398000 CHEVELON CREEK NEAR WINSLOW, AZ--CONTINUED







09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, AZ

LOCATION.--Lat 34°40'03", long 111°00'25", in SW¼SE¼ sec.19, T.15 N., R.13 E., Coconino County, Hydrologic Unit 15020008, in Apache-Sitgreaves National Forest, on right bank 2 mi downstream from Willow Creek and 30 mi southwest of Winslow.

DRAINAGE AREA.--317 mi^2.

REMARKS.--Flow is partially controlled by Blue Ridge Reservoir (usable capacity, 15,000 acre-ft) about 20 mi upstream. Diversion to East Verde River from Blue Ridge Reservoir.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1948	04-12-48	1,810		1969	01-26-69	5,550	UR
1949	04-15-49	1,990		1970	09-06-70	15,800	UR
1950	02-28-50	1,090		1971	08-27-71	1,180	UR
1951	08-29-51	8,090		1972	12-26-71	5,840	UR
1952	01-18-52	16,400		1973	10-20-72	8,190	UR
1953	03-11-53	497		1974	03-21-74	589	UR
1954	03-23-54	5,730		1975	04-26-75	920	UR
1955	06-14-55	1,220		1976	02-09-76	4,170	UR
1956	03-26-56	198		1977	04-09-77	353	UR
1957	01-10-57	8,880		1978	03-01-78	10,500	UR
1958	03-22-58	2,920		1979	12-18-78	[1]19,700	UR
1959	08-20-59	296		1980	02-20-80	8,140	UR
1960	12-25-59	2,770		1981	04-08-81	250	UR
1961	04-05-61	1,080		1982	03-12-82	5,230	UR
1962	02-13-62	2,240		1983	04-25-83	2,020	UR
1963	02-11-63	403		1984	12-27-83	2,130	UR
1964	04-16-64	1,210		1985	03-12-85	4,750	UR
1965	01-07-65	5,600	UR	1986	11-26-85	2,570	UR
1966	12-30-65	13,100	UR	1987	04-12-87	1,070	UR
1967	12-07-66	9,970	UR	1988	11-01-87	1,270	UR
1968	04-02-68	1,840	UR	1989	03-11-89	602	UR

[1]Highest since 1939.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
26.0	41.0	7,100	100	3.0	25.8	2.6	4.7

09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1948-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	359	0.00	17	62	3.6	1.7
NOVEMBER	202	0.00	25	51	2.0	2.5
DECEMBER	720	0.00	75	150	2.0	7.4
JANUARY	576	0.00	63	131	2.1	6.3
FEBRUARY	721	0.00	92	140	1.5	9.1
MARCH	1,250	4.0	260	255	0.98	25.8
APRIL	1,330	0.00	369	372	1.0	36.6
MAY	1,050	0.00	78	180	2.3	7.7
JUNE	39	0.00	1.4	6.1	4.3	0.1
JULY	4.3	0.00	0.26	0.90	3.5	0.0
AUGUST	228	0.00	16	48	3.0	1.6
SEPTEMBER	218	0.00	11	41	3.6	1.1
ANNUAL	279	9.0	84	68	0.81	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1949-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1948-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,680	6,740	10,800	17,400	23,700	31,100

WEIGHTED SKEW (LOGS)= -0.15
MEAN (LOGS)= 3.41
STANDARD DEV. (LOGS)= 0.49

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1948-89

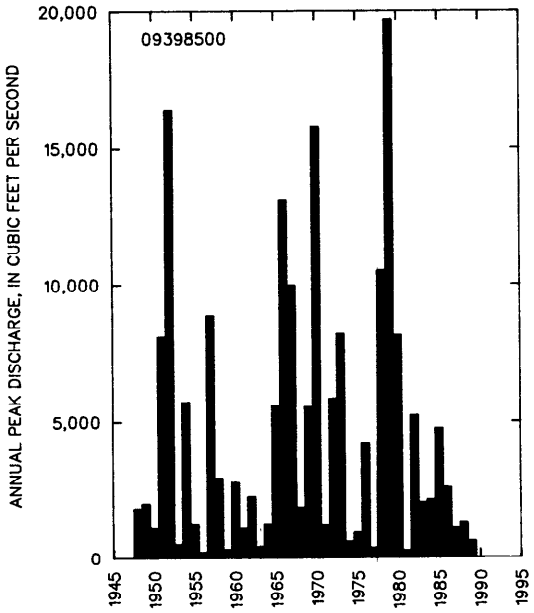
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,630	3,780	5,680	8,530	10,900	13,600
3	1,250	2,610	3,660	5,070	6,150	7,230
7	911	1,680	2,190	2,810	3,230	3,620
15	614	1,110	1,460	1,890	2,210	2,510
30	426	824	1,140	1,580	1,940	2,310
60	271	547	776	1,110	1,390	1,700
90	206	428	614	887	1,120	1,360

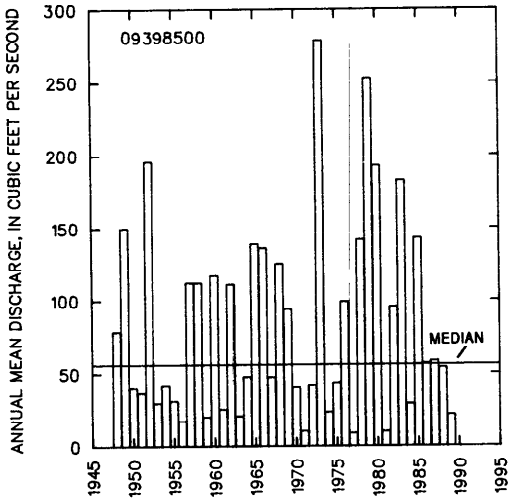
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-89

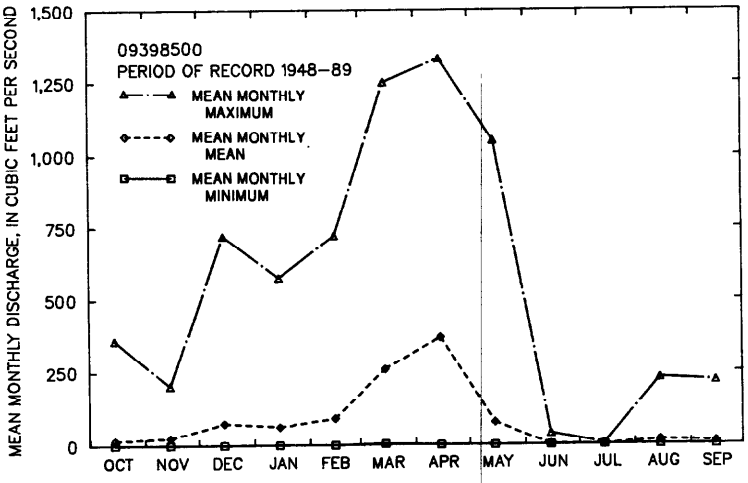
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,370	495	191	102	61	16	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, AZ--CONTINUED







09399000 CLEAR CREEK NEAR WINSLOW, AZ

LOCATION.--Lat 34°58'10", long 110°38'40", in SE¼SE¼ sec.9, T.18 N., R.16 E., Navajo County, Hydrologic Unit 15020008, on right bank 10 ft downstream from bridge on State Highway 99, 1.5 mi upstream from mouth, and 5 mi southeast of Winslow.

DRAINAGE AREA.--621 mi^2.

REMARKS.--Records show discharge over spillway and through outlet tube. Prior to Nov. 20, 1982, records show discharge over dam but do not show leakage through dam. Storage in and diversion from Blue Ridge Reservoir near Pine, about 50 mi upstream, since December 1964.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1929	04-04-29	50,000		1956	03-27-56	173	
1930	04-10-30	1,080		1957	01-11-57	9,150	
1931	03-24-31	850		1958	03-23-58	2,920	
1932	02-10-32	6,100		1959	10-01-58	542	
1933	04-05-33	780		1960	12-26-59	2,440	
1934	00-00-34	6,300		1961	04-06-61	925	
1936	04-14-36	1,680		1962	02-13-62	2,330	
1937	03-17-37	2,790		1963	09-02-63	881	
1938	03-04-38	26,200		1964	04-17-64	1,060	
1939	04-04-39	1,500		1965	01-08-65	5,930	UR
1940	08-15-40	1,840		1966	12-30-65	18,500	UR
1941	03-15-41	3,300		1967	12-07-66	12,500	UR
1942	04-06-42	1,940		1968	04-02-68	1,840	UR
1943	03-11-43	1,500		1969	01-26-69	5,700	UR
1944	04-08-44	1,500		1970	09-06-70	9,650	UR
1945	04-22-45	2,230		1971	08-05-71	1,460	UR
1946	09-20-46	1,100		1972	12-27-71	5,480	UR
1947	11-25-46	1,740		1973	10-20-72	9,350	UR
1948	04-13-48	1,810		1974	03-22-74	538	UR
1949	04-16-49	1,970		1975	09-12-75	3,940	UR
1950	03-01-50	1,000		1976	02-10-76	2,120	UR
1951	08-30-51	8,530		1977	04-10-77	372	UR
1952	01-19-52	22,500		1978	03-01-78	12,900	UR
1953	08-27-53	695		1979	12-19-78	36,300	UR
1954	03-24-54	5,800		1980	02-20-80	10,800	UR
1955	08-25-55	1,080		1982	04-09-82	570	UR

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
24.1	85.9	6,500	66.0	3.0	18.7	2.1	4.0

09399000 CLEAR CREEK NEAR WINSLOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1930-33, 1936-78, 1980-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	348	0.00	13	52	4.2	1.3
NOVEMBER	174	0.00	15	34	2.3	1.6
DECEMBER	480	0.00	38	98	2.6	4.0
JANUARY	784	0.00	54	142	2.6	5.7
FEBRUARY	780	0.00	87	162	1.9	9.1
MARCH	1,250	0.00	256	277	1.1	26.8
APRIL	1,290	0.00	372	344	0.92	39.0
MAY	1,090	0.00	93	190	2.1	9.7
JUNE	25	0.00	1.5	4.0	2.7	0.2
JULY	18	0.00	1.7	3.3	2.0	0.2
AUGUST	207	0.00	11	37	3.3	1.2
SEPTEMBER	192	0.00	12	34	2.9	1.2
ANNUAL	271	6.5	79	65	0.82	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1930-33, 1937-78, 1980-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.04	0.00	0.00	0.00	0.00	0.00
120	0.36	0.00	0.00	0.00	0.00	0.00
183	0.84	0.05	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1929-34, 1936-64, 1965-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,620	7,530	13,600	26,100	40,600	60,900

WEIGHTED SKEW (LOGS)= 0.32
MEAN (LOGS)= 3.45
STANDARD DEV. (LOGS)= 0.52

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1930-33, 1936-78, 1980-82

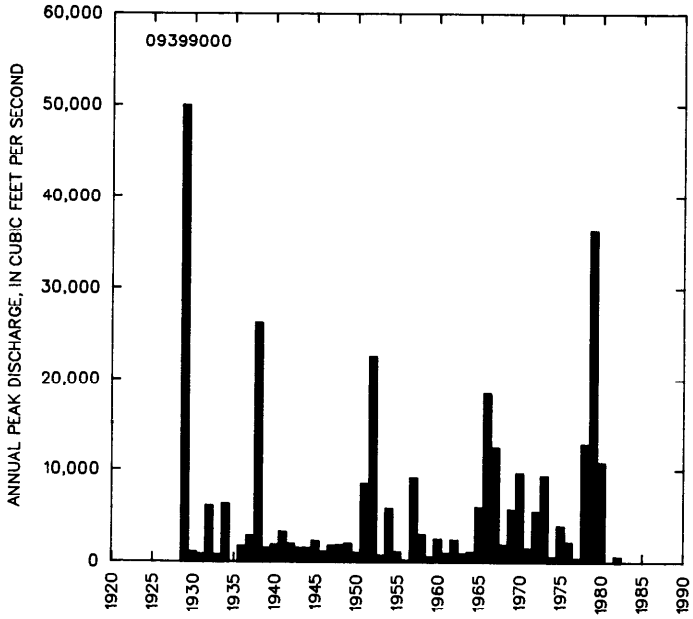
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,520	3,650	5,760	9,370	12,800	17,000
3	1,200	2,440	3,420	4,780	5,850	6,960
7	900	1,660	2,160	2,750	3,140	3,490
15	637	1,160	1,490	1,880	2,140	2,380
30	446	855	1,140	1,490	1,740	1,980
60	282	577	796	1,080	1,300	1,510
90	209	446	633	886	1,080	1,280

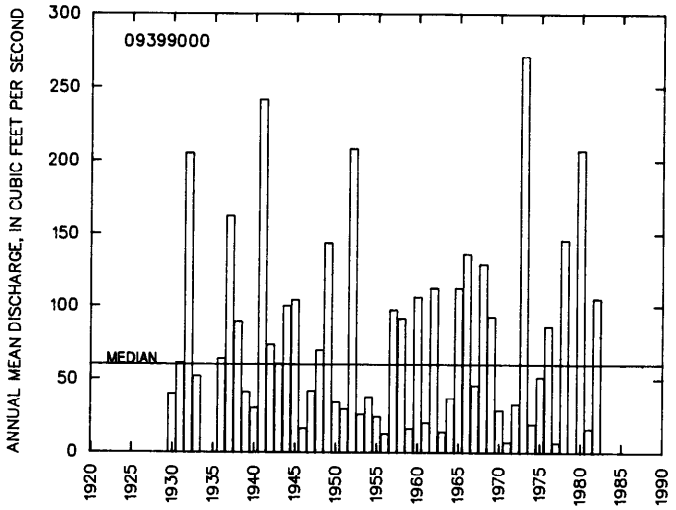
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-33, 1936-78, 1980-82

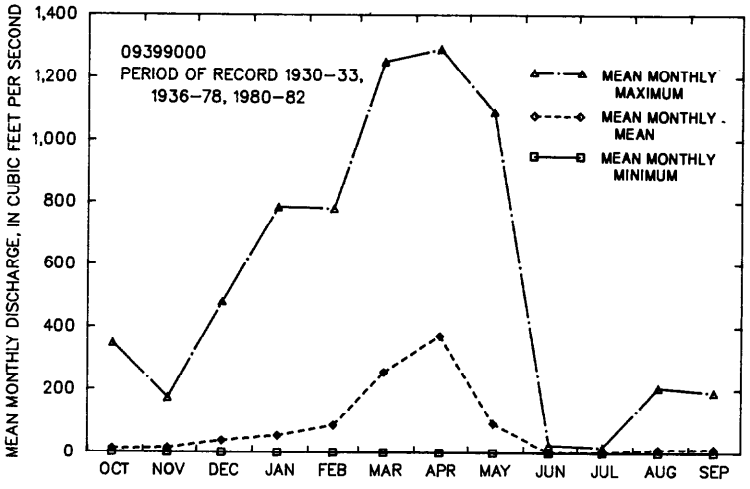
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,320	482	199	89	42	7.0	2.1	0.96	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09399000 CLEAR CREEK NEAR WINSLOW, AZ--CONTINUED







09399250 JACKS CANYON TRIBUTARY NO. 2 NEAR WINSLOW, AZ

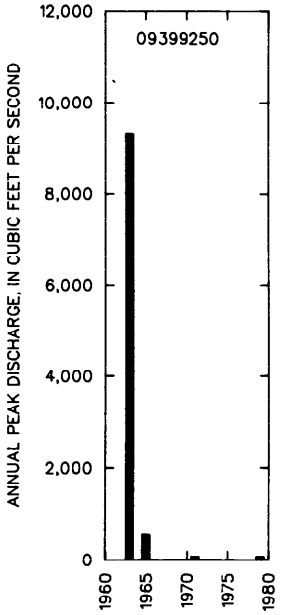
LOCATION.--Lat 34°45'56", long 111°00'44", in NE¼NW¼ sec.19, T.16 N., R.13 E., Coconino County, Hydrologic Unit 15020008, at State Highway 87, 27 mi southwest of Winslow.

DRAINAGE AREA.--31.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-21-63	9,330	
1964	00-00-64	0	
1965	07-10-65	544	
1966	00-00-66	0	
1967	00-00-67	0	
1968	00-00-68	0	
1969	00-00-69	0	
1970	00-00-70	0	
1971	07-00-71	67	
1972	00-00-72	0	
1973	10-00-72	2.0	LT
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	([1])	
1979	12-18-78	[2]67	HP

[1]Discharge unknown.
[2]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
71.6	10.8	6,530	71.0	3.0	19.2	2.1	3.3

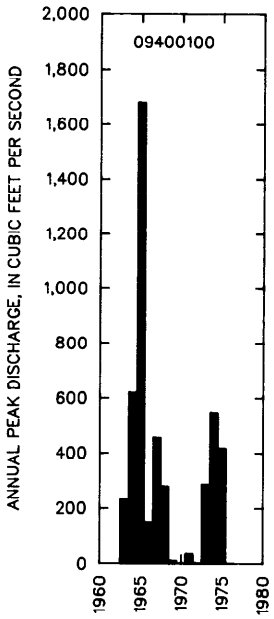
09400100 GANADO WASH TRIBUTARY NEAR GANADO, AZ

LOCATION.--Lat 35°42'40", long 109°29'50", Apache County, Hydrologic Unit 15020011, at State Highway 264, 2.4 mi east of Ganado.

DRAINAGE AREA.--7.85 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-09-63	231	
1964	08-26-64	620	
1965	07-17-65	1,680	
1966	00-00-66	150	
1967	09-00-67	456	
1968	00-00-68	280	
1969	07-26-69	10	ES
1970	09-06-70	1.0	ES
1971	08-30-71	35	ES
1972	06-00-72	2.0	
1973	00-00-73	287	
1974	07-16-74	548	
1975	07-12-75	418	
1976	00-00-76	0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
238	533	819	1,300	1,760	2,320

WEIGHTED SKEW (LOGS)=	0.10
MEAN (LOGS)=	2.38
STANDARD DEV. (LOGS)=	0.41

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
55.5	4.1	6,770	6.8	3.0	11.8	1.4	2.9

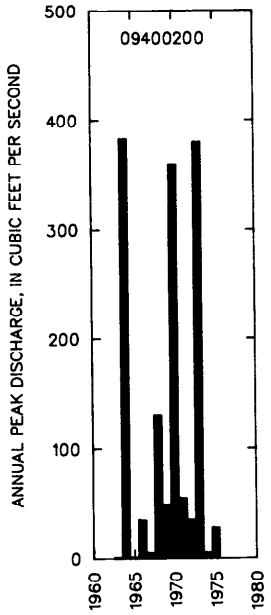
09400200 STEAMBOAT WASH TRIBUTARY NEAR GANADO, AZ

LOCATION.--Lat 35°45'50", long 109°48'00", Apache County, Hydrologic Unit 15020011, at State Highway 264, 15 mi west of Ganado.

DRAINAGE AREA.--0.32 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	09-00-63	1.0
1964	08-13-64	383
1965	09-00-65	1.0
1966	08-00-66	35
1967	09-06-67	5.0
1968	08-00-68	130
1969	07-19-69	49
1970	09-05-70	360
1971	10-02-70	55
1972	06-00-72	35
1973	10-19-72	380
1974	08-00-74	5.0
1975	09-07-75	28



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
46.6	167	322	648	1,020	1,520

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 1.66
STANDARD DEV. (LOGS)= 0.66

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
100	1.1	6,750	72.0	1.0	12.1	1.5	2.9

09400290 TESHBITO WASH TRIBUTARY NEAR HOLBROOK, AZ

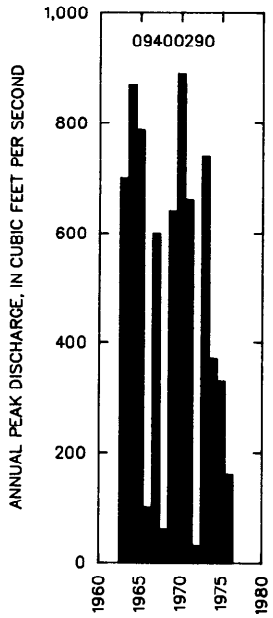
LOCATION.--Lat 35°28'50", long 110°05'15", in SW¼ sec.14, T.24 N., R.21 E., Navajo County, Hydrologic Unit 15020011, at State Highway 77, 7 mi north of Bita Hochee Trading Post, and 37 mi north of Holbrook.

DRAINAGE AREA.--20.0 mi^2, of which 10.7 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	00-00-60	([1])	HP
1963	00-00-63	700	
1964	08-00-64	870	
1965	07-00-65	787	
1966	08-01-66	100	
1967	08-30-67	600	
1968	08-11-68	61	
1969	09-12-69	640	
1970	09-05-70	890	
1971	08-31-71	660	
1972	09-00-72	30	ES
1973	10-19-72	740	
1974	08-00-74	370	
1975	07-15-75	330	
1976	00-00-76	160	

[1]Discharge unknown.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
371	874	1,310	1,950	2,470	3,030

WEIGHTED SKEW (LOGS)= -0.46
MEAN (LOGS)= 2.53
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
93.7	6.4	6,420	43.0	3.0	8.2	1.3	2.9

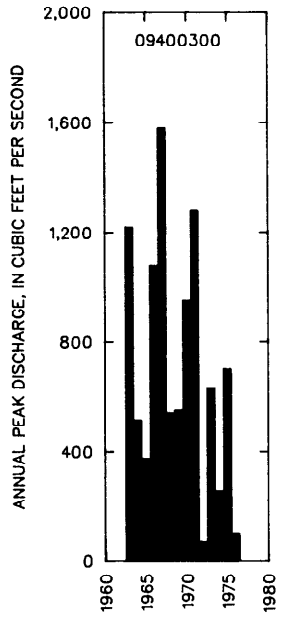
09400300 TESHBITO WASH NEAR HOLBROOK, AZ

LOCATION.--Lat 35°26'55", long 110°04'05", in NW¼ sec.36, T.24 N., R.21 E., Navajo County, Hydrologic Unit 15020011, at State Highway 77, 4.0 miles north of Bita Hochee Trading Post, 35 miles north of Holbrook.

DRAINAGE AREA.--60.3 mi^2, of which 10.7 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/SEC)
1963	09/06/63	1,220
1964	08/13/64	514
1965	07/20/65	374
1966	08/01/66	1,080
1967	00/00/67	1,580
1968	08/11/68	540
1969	09/12/69	550
1970	09/05/70	950
1971	08/00/71	1,280
1972	00/00/72	68
1973	10/19/72	628
1974	08/00/74	256
1975	07/15/75	700
1976	00/00/76	100



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
653	1,050	1,340	1,720	2,020	2,320

WEIGHTED SKEW (LOGS)= -0.14
MEAN (LOGS)= 2.81
STANDARD DEV. (LOGS)= 0.25

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
57.7	10.4	6,280	16.0	3.0	9.2	1.3	2.9

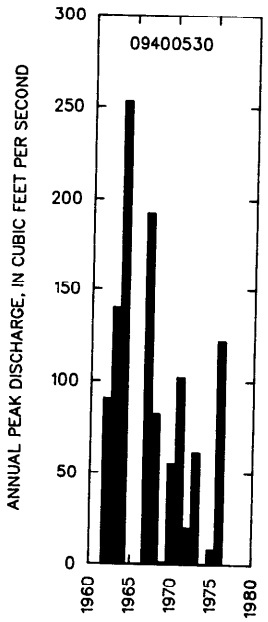
09400530 COW CANYON NEAR WINSLOW, AZ

LOCATION.--Lat 35°06'00", long 110°59'15", in SW¼ sec.29, T.20 N., R.13E., Coconino County, Hydrologic Unit 15020008, at U.S. Highway 66, 17 mi west of Winslow.

DRAINAGE AREA.--7.53 mi^2, of which 3.96 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	90	ES
1963	08-30-63	140	
1964	07-30-64	253	
1965	00-00-65	0	
1966	00-00-66	0.1	LT
1967	00-00-67	192	
1968	00-00-68	82	
1969	12-02-68	1.0	LT
1970	00-00-70	55	
1971	08-00-71	102	
1972	07-16-72	20	
1973	10-00-72	61	
1974	00-00-74	0	
1975	09-18-75	8.0	
1976	00-00-76	122	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
64.8	129	181	257	319	387

WEIGHTED SKEW (LOGS)= -0.23
MEAN (LOGS)= 1.80
STANDARD DEV. (LOGS)= 0.37

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
61.8	4.1	5,380	0.0	3.0	10.0	1.4	2.9

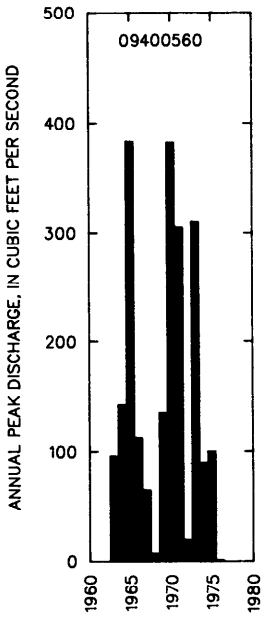
09400560 ORAIBI WASH TRIBUTARY NEAR ORAIBI, AZ

LOCATION.--Lat 35°52'20", long 110°33'20", in SW¼ sec.31, T.29 N., R.17 E., Navajo County, Hydrologic Unit 15020012, at State Highway 264, 3.5 mi east of Oraibi.

DRAINAGE AREA.--1.78 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	96	
1964	07-31-64	142	
1965	09-19-65	383	
1966	00-00-66	112	
1967	00-00-67	65	
1968	00-00-68	7.0	
1969	07-19-69	135	
1970	09-05-70	382	
1971	00-00-71	305	
1972	07-00-72	20	
1973	10-19-72	310	
1974	07-19-74	90	
1975	09-07-75	100	
1976	00-00-76	1.0	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
124	240	339	490	622	770

WEIGHTED SKEW (LOGS)= -0.00
MEAN (LOGS)= 2.09
STANDARD DEV. (LOGS)= 0.34

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
105.0	2.0	6,020	38.0	3.0	10.2	1.3	2.8

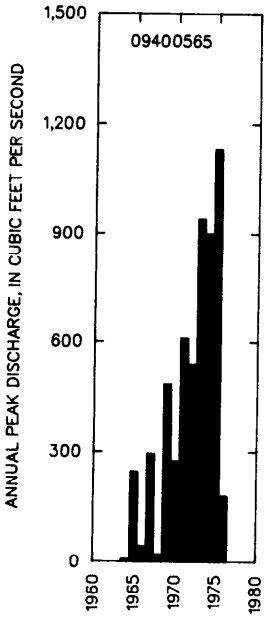
09400565 POLACCA WASH TRIBUTARY NEAR CHINLE, AZ

LOCATION.--Lat 36°02'50", long 110°04'50", Navajo County, Hydrologic Unit 15020013, at Navajo Highway No. 4, 9 mi east of Pinon, and 31 mi southwest of Chinle.

DRAINAGE AREA.--6.45 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-20-64	7.0	ES
1965	09-19-65	247	
1966	00-00-66	43	
1967	09-00-67	295	
1968	08-00-68	20	ES
1969	09-11-69	485	
1970	00-00-70	275	
1971	08-26-71	610	
1972	00-00-72	540	
1973	10-19-72	940	
1974	07-21-74	900	
1975	09-07-75	1,130	
1976	00-00-76	180	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
361	708	995	1,420	1,770	2,150

WEIGHTED SKEW (LOGS)= -0.17
MEAN (LOGS)= 2.55
STANDARD DEV. (LOGS)= 0.36

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
160	5.7	6,890	78.0	1.0	12.3	1.5	2.9

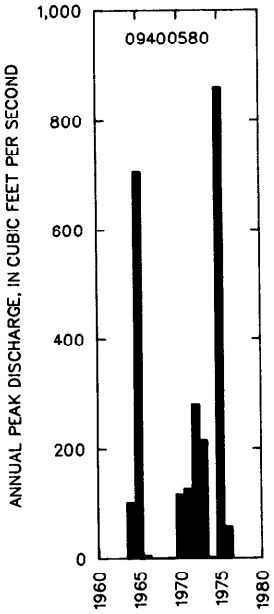
09400580 CASTLE BUTTE WASH NEAR WINSLOW, AZ

LOCATION.--Lat 35°19'30", long 110°25'20", in SW¼ sec.10, T.22 N., R.18 E., Navajo County, Hydrologic Unit 15020014, at State Highway 87, 26 mi northeast of Winslow.

DRAINAGE AREA.--5.57 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-09-64	101	
1965	07-00-65	707	
1966	00-00-66	5.0	ES
1967	00-00-67	0	
1968	00-00-68	0	
1969	10-04-68	1.0	LT
1970	09-05-70	117	
1971	08-00-71	127	
1972	09-18-72	280	
1973	10-19-72	215	
1974	07-17-74	2.0	ES
1975	07-15-75	860	
1976	00-00-76	58	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
86	289	536	1,020	1,540	2,220

WEIGHTED SKEW (LOGS)= -0.12
MEAN (LOGS)= 1.92
STANDARD DEV. (LOGS)= 0.64

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
83.8	3.2	5,820	0.0	1.0	8.6	1.3	2.7

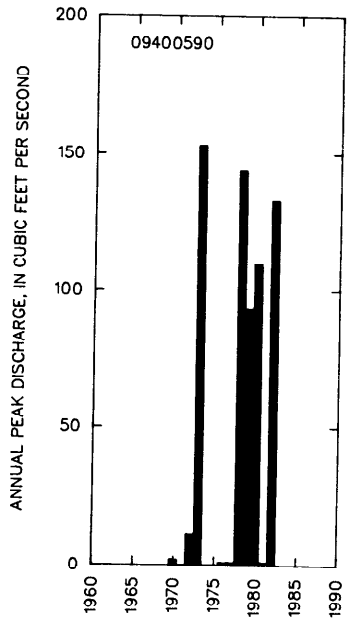
09400590 RIO DE FLAG AT HIDDEN HOLLOW ROAD, AT FLAGSTAFF, AZ

LOCATION.--Lat 35°14'31", long 111°41'02", in SW¼SW¼ sec.32, T.22 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at Hidden Hollow Road, 1.4 mi northwest of the Museum of Northern Arizona, and 3.4 mi northwest of downtown Flagstaff.

DRAINAGE AREA.--31.5 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	08-03-70	2.0	ES
1971	08-00-71	0.1	LT
1972	12-26-71	11	
1973	04-28-73	153	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	1.0	LT
1977	00-00-77	1.0	LT
1978	04-00-78	144	
1979	05-00-79	93	
1980	02-20-80	110	
1981	00-00-81	1.0	ES
1982	03-12-82	133	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ---
STANDARD DEV. (LOGS)= ---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
129	8.1	8,130	78.0	3.0	25.4	2.3	4.5

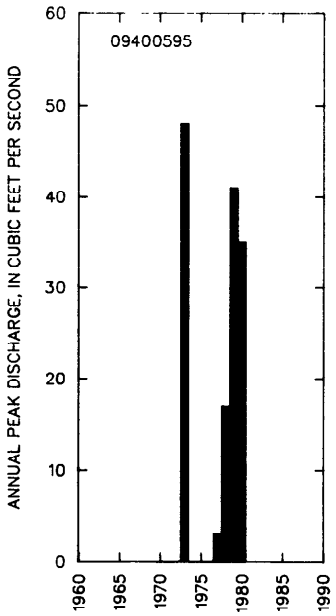
09400595 SCHULTZ CANYON AT FLAGSTAFF, AZ

LOCATION.--Lat 35°13'37", long 111°39'29", in SE¼SW¼ sec.4, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at U.S. Highway 180, 0.6 mi south of the Museum of Northern Arizona in Flagstaff.

DRAINAGE AREA.--6.09 mi^2.

ANNUAL PEAK DISCNARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	00-00-70	0	
1971	00-00-71	0	
1972	00-00-72	0	
1973	04-28-73	48	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	0	
1977	00-00-77	3.0	LT
1978	07-06-78	17	
1979	03-00-79	41	
1980	03-00-80	35	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
296	5.8	8,060	89.0	3.0	21.9	2.1	4.0

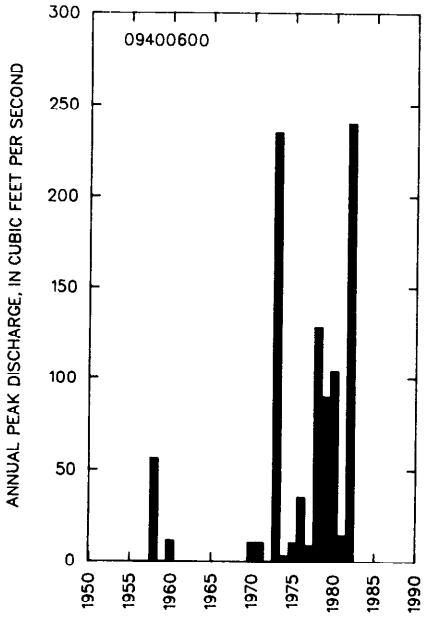
09400600 RIO DE FLAG AT FLAGSTAFF, AZ

LOCATION.--Lat 35°13'18", long 111°39'24", in NW¼NE¼ sec.9, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at west side of Crescent Drive in Flagstaff.

DRAINAGE AREA.--51.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1956	00-00-56	0	C
1957	00-00-57	0	C
1958	04-20-58	56	C
1959	00-00-59	0	C
1960	03-24-60	11	C
1970	08-03-70	10	ES,C
1971	09-30-71	10	LT,C
1972	00-00-72	0	C
1973	04-28-73	235	C
1974	04-03-74	3.0	LT,C
1975	04-00-75	10	ES,C
1976	02-09-76	35	C
1977	05-15-77	8.5	KR,C
1978	04-00-78	128	C
1979	05-00-79	90	C
1980	07-00-80	104	C
1981	04-00-81	14	ES,C
1982	03-12-82	240	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-60, 1970-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
17.2	74.5	167	340	557	861

WEIGHTED SKEW (LOGS)= -0.13
MEAN (LOGS)= 1.22
STANDARD DEV. (LOGS)= 0.77

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
106	10.8	8,050	76.0	3.0	25.3	2.2	4.3

09400650 SINCLAIR WASH AT FLAGSTAFF, AZ

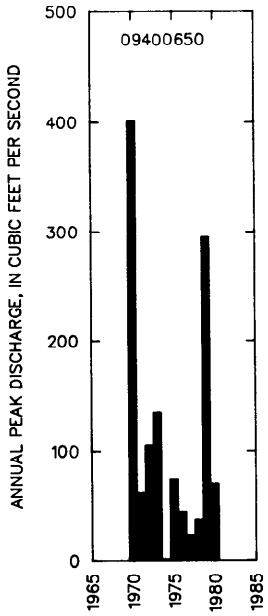
LOCATION.--Lat 35°09'50", long 111°40'48", in NW¼NW¼ sec.32, T.21 N., R.7 E., Coconino County, at Holmes Avenue in the community of Palmerville at Flagstaff.

DRAINAGE AREA.--8.11 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	09-05-70	[1]401	
1971	07-21-71	62	
1972	12-28-71	105	
1973	10-19-72	135	
1974	08-01-74	1.0	LT
1975	10-30-74	74	
1976	04-00-76	44	
1977	08-09-77	23	
1978	02-28-78	37	
1979	12-18-78	295	
1980	02-20-80	70	

[1]Highest since 1944.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1970-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
74.2	168	260	416	566	748

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 1.88
STANDARD DEV. (LOGS)= 0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
69.9	4.8	7,200	88.0	3.0	22.5	2.2	4.0

09400655 RIO DE FLAG AT INTERSTATE 40 AT FLAGSTAFF, AZ

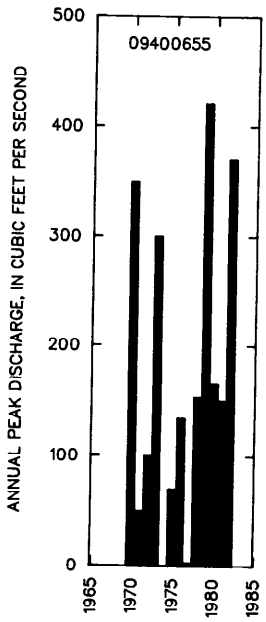
LOCATION.--Lat 35°11'04", long 111°37'56", in SE¼SE¼ sec.22, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, on left bank 80 ft upstream from bridge for eastbound lanes of Interstate 40, in Flagstaff.

DRAINAGE AREA.--82.4 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	09-05-70	350	ES,C
1971	07-21-71	50	ES,C
1972	12-28-71	100	ES,C
1973	04-25-73	[1]300	C
1974	00-00-74	0	
1975	10-30-74	70	ES,C
1976	02-09-76	134	C
1977	00-00-77	3.0	LT,
1978	02-28-78	153	C
1979	12-19-78	421	C
1980	02-20-80	165	C
1981	04-00-81	150	ES,C
1982	03-12-82	370	C

[1]Highest since 1938.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
55.5	5.9	7,840	97.0	3.0	20.0	1.9	3.6

LITTLE COLORADO RIVER BASIN

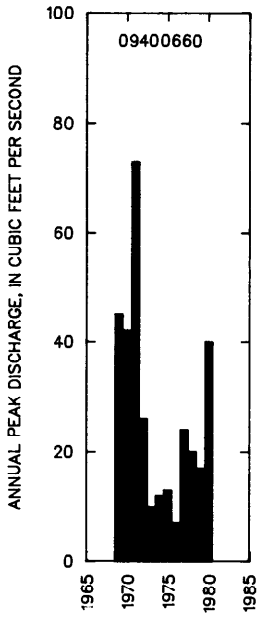
09400660 BOW AND ARROW WASH AT FLAGSTAFF, AZ

LOCATION.--Lat 35°09'58", long 111°39'10", in NW¼NE¼ sec.33, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at Zuni Road in Flagstaff.

DRAINAGE AREA.--2.06 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1969	00-00-69	45	C
1970	09-05-70	42	C
1971	08-15-71	73	C
1972	12-28-71	26	C
1973	00-00-73	10	LT,C
1974	08-02-74	12	C
1975	00-00-75	13	C
1976	07-00-76	7	ES,C
1977	08-09-77	24	C
1978	10-06-77	20	C
1979	11-11-78	17	C
1980	02-18-80	40	ES,C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
22.1	39.7	53.9	74.7	92	111

WEIGHTED SKEW (LOGS)=	-0.02
MEAN (LOGS)=	1.34
STANDARD DEV. (LOGS)=	0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.5	2.9	6,990	75.0	3.0	19.4	2.0	4.0

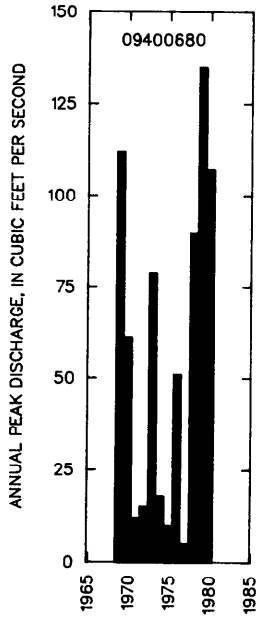
09400680 SWITZER CANYON AT FLAGSTAFF, AZ

LOCATION.--Lat 35°12'44", long 111°38'21", in SW¼SE¼ sec.10, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at Turquoise and Oak Streets in Flagstaff.

DRAINAGE AREA.--1.87 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1969	09-12-69	112
1970	09-05-70	61
1971	08-03-71	12
1972	12-28-71	15
1973	04-13-73	79
1974	08-10-74	18
1975	09-00-75	10
1976	02-09-76	51
1977	07-22-77	5
1978	02-28-78	90
1979	12-18-78	135
1980	02-19-80	107



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
38.4	95.9	151	240	321	413

WEIGHTED SKEW (LOGS)= -0.25
MEAN (LOGS)= 1.56
STANDARD DEV. (LOGS)= 0.49

† Reliability of values in column is uncertain, and potential errors are large.

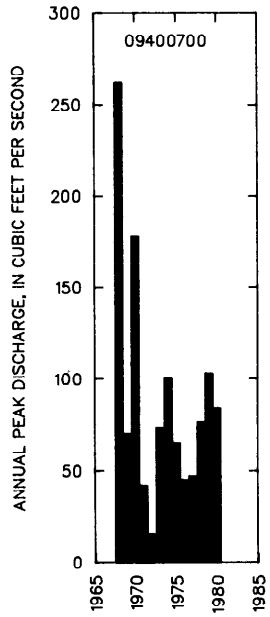
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
375	2.4	7,130	45.0	3.0	19.9	2.0	4.0

09400700 SWITZER CANYON TRIBUTARY AT FLAGSTAFF, AZ

LOCATION.--Lat 35°12'03", long 111°36'46", in NE¼SE¼ sec.14, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at gravel road 500 ft upstream from Interstate 40, and one-quarter mile downstream from U.S. Highway 66 in Flagstaff.

DRAINAGE AREA.--7.02 mi^2, of which 2.50 mi^2 is noncontributing.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1968	08-02-68	262	C
1969	09-12-69	70	C
1970	09-05-70	178	C
1971	08-03-71	42	C
1972	12-28-71	15	C
1973	07-16-73	73	C
1974	08-06-74	100	C
1975	07-16-75	65	C
1976	02-09-76	45	C
1977	08-09-77	47	C
1978	07-15-78	76	C
1979	08-12-79	103	C
1980	02-19-80	84	C

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
75.2	124	163	221	271	326

WEIGHTED SKEW (LOGS)= 0.28
MEAN (LOGS)= 1.89
STANDARD DEV. (LOGS)= 0.25

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
267	4.1	6,950	78.0	3.0	20.0	2.0	4.0

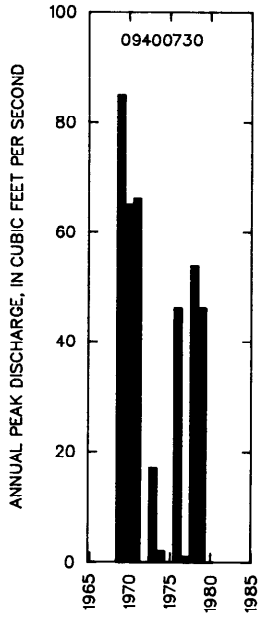
09400730 LOCKETT FANNING DIVERSION AT FLAGSTAFF, AZ

LOCATION.--Lat 35°13'19", long 111°35'58", in NW¼NE¼ sec.12, T.21 N., R.7 E., Coconino County, Hydrologic Unit 15020015, at Linda Vista Drive in Flagstaff.

DRAINAGE AREA.--1.05 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1969	09-12-69	85	
1970	09-05-70	65	
1971	08-22-71	66	
1972	00-00-72	0	
1973	07-16-73	17	
1974	08-06-74	2.0	ES
1975	00-00-75	0	
1976	07-14-76	46	
1977	08-09-77	1.0	ES
1978	07-26-78	54	
1979	12-18-78	46	
1980	00-00-80	0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)=	----
MEAN (LOGS)=	----
STANDARD DEV. (LOGS)=	----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
928	2.0	8,020	100.0	3.0	20.0	2.0	4.0

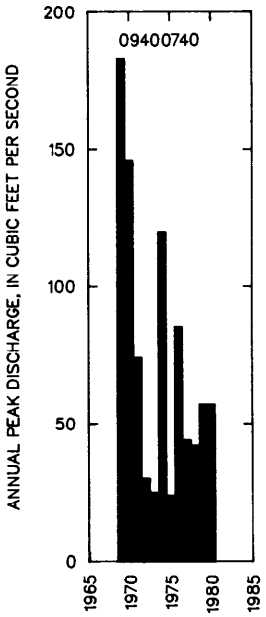
09400740 HARENBERG WASH AT FLAGSTAFF, AZ

LOCATION.--Lat 35°13'09", long 111°35'16", in SE¼NW¼ sec.7, T.21 N., R.8 E., Coconino County, Hydrologic Unit 15020015, at Atchison, Topeka, and Santa Fe railroad tracks at the east edge of Flagstaff.

DRAINAGE AREA.--2.41 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1969	09-12-69	183	C
1970	09-05-70	146	C
1971	08-19-71	74	C
1972	07-24-72	30	C
1973	07-00-73	25	ES,C
1974	08-06-74	120	C
1975	09-00-75	24	C
1976	07-13-76	85	C
1977	08-09-77	44	C
1978	02-28-78	42	C
1979	02-17-79	57	C
1980	07-00-80	57	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
60.2	107	144	198	243	293

WEIGHTED SKEW (LOGS)= -0.02
MEAN (LOGS)= 1.78
STANDARD DEV. (LOGS)= 0.30

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
594	3.1	7,570	91.0	3.0	20.1	2.0	4.0

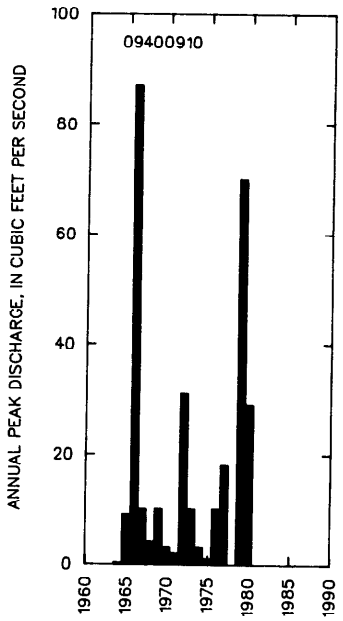
09400910 FAY CANYON NEAR FLAGSTAFF, AZ

LOCATION.--Lat 35°08'06", Long 111°37'48", in NW¼NW¼ sec.11, T.20 N., R.7 E., Cococino County, Hydrologic Unit 15020015; at Lake Mary Road within corporate limits of Flagstaff.

DRAINAGE AREA.--3.28 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	00-00-64	0.3	LT
1965	09-18-65	9.0	
1966	12-30-65	87	
1967	00-00-67	10	LT
1968	04-00-68	4.0	
1969	01-25-69	10	LT
1970	09-05-70	3.0	ES
1971	08-15-71	2.0	ES
1972	10-24-71	31	
1973	10-00-72	10	ES
1974	08-06-74	3.0	LT
1975	09-00-75	1.0	LT
1976	00-00-76	10	ES
1977	08-09-77	18	
1979	00-00-79	70	
1980	02-19-80	29	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-77, 1979-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
8	36	66	98	128	182

WEIGHTED SKEW (LOGS)= 0.01
MEAN (LOGS)= 0.96
STANDARD DEV. (LOGS)= 0.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
72.2	2.4	7,000	73.0	3.0	19.6	2.1	4.1

09401000 LITTLE COLORADO RIVER AT GRAND FALLS, AZ

LOCATION.--Lat 35°26', long 111°12', in T.24 N., R.11 E., Coconino County, Hydrologic Unit 15020016, on left bank 1,000 ft downstream from Grand Falls on Navajo Indian Reservation, 4.5 mi upstream from Dinnebito Wash, 30 mi northeast of Flagstaff, and 96 mi upstream from mouth.

DRAINAGE AREA.--21,068 mi^2, of which 368 mi^2 is noncontributing.

REMARKS.--Some regulation by reservoirs on headwaters (combined capacity, about 71,000 acre-ft in 1950, not including Lone Pine Reservoir or Lake Mary).

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1923	09-19-23	[1]120,000	HP	1944	09-29-44	5,320	
1926	09-27-26	27,800		1945	08-12-45	4,650	
1927	06-28-27	28,800		1946	09-19-46	12,900	
1928	02-07-28	2,140		1947	08-24-47	10,600	
1929	04-05-29	50,500		1948	10-16-47	12,400	
1930	07-19-30	13,700		1949	08-09-49	10,400	
1931	08-01-31	6,530		1950	07-18-50	3,500	
1932	02-10-32	31,000		1951	08-30-51	10,200	
1933	09-12-33	7,500		1952	01-20-52	26,100	
1934	10-07-33	4,920		1953	07-31-53	4,140	
1935	04-10-35	7,350		1954	03-25-54	7,450	
1936	08-06-36	5,430		1955	06-15-55	9,020	
1937	02-09-37	21,800		1956	08-17-56	2,320	
1938	03-05-38	38,000		1957	01-12-57	8,390	
1939	04-05-39	6,680		1958	08-23-58	4,560	
1940	07-27-40	20,100		1959	08-07-59	3,080	
1941	03-15-41	17,000		1960	11-01-59	7,960	
1942	10-04-41	8,760		1970	09-06-70	11,400	KR,HP
1943	09-28-43	3,900		1972	10-03-71	13,200	KR,HP

[1]Highest since 1870.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
10.5	234	6,440	33.0	2.7	12.9	1.5	2.9

09401000 LITTLE COLORADO RIVER AT GRAND FALLS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1927-49, 1951, 1954-59

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	927	0.00	127	242	1.9	4.1
NOVEMBER	287	0.00	41	75	1.8	1.3
DECEMBER	468	0.00	34	87	2.6	1.1
JANUARY	922	0.00	94	212	2.3	3.0
FEBRUARY	2,670	0.00	349	643	1.8	11.2
MARCH	2,390	4.1	647	679	1.0	20.7
APRIL	2,610	8.8	642	657	1.0	20.5
MAY	1,410	0.00	106	265	2.5	3.4
JUNE	622	0.00	34	124	3.6	1.1
JULY	1,580	0.00	181	327	1.8	5.8
AUGUST	1,990	0.00	531	487	0.92	17.0
SEPTEMBER	1,940	0.00	337	448	1.3	10.8
ANNUAL	811	26	260	191	0.74	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1927-49, 1955-60

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.62	0.00	0.00	0.00	0.00	0.00
120	7.0	1.2	0.00	0.00	0.00	0.00
183	58	22	13	8.1	4.7	3.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1923, 1926-60

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
9,140	18,700	28,000	44,300	60,400	80,600

WEIGHTED SKEW (LOGS)= 0.42
MEAN (LOGS)= 3.99
STANDARD DEV. (LOGS)= 0.35

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1927-49, 1951, 1954-59

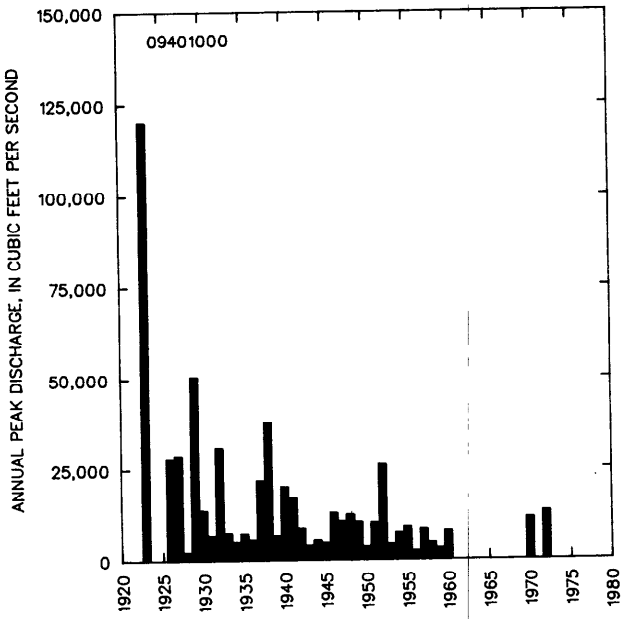
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	5,510	10,400	14,500	20,600	25,900	31,700
3	3,950	7,150	9,670	13,300	16,200	19,300
7	2,600	4,310	5,420	6,750	7,680	8,560
15	1,860	2,830	3,300	3,730	3,950	4,120
30	1,250	1,950	2,320	2,690	2,910	3,090
60	815	1,390	1,770	2,250	2,580	2,910
90	587	1,050	1,380	1,820	2,150	2,490

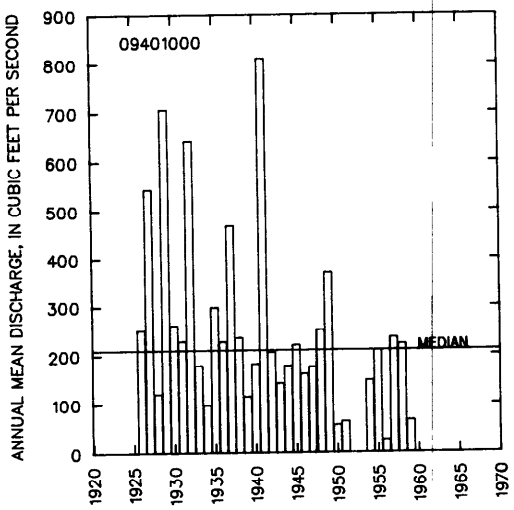
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-49, 1951, 1954-59

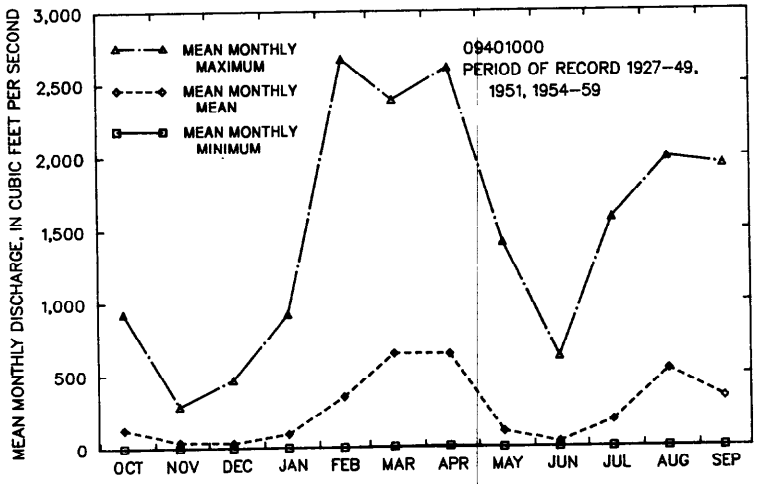
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,530	1,440	730	413	229	84	27	9.3	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09401000 LITTLE COLORADO RIVER AT GRAND FALLS, AZ--CONTINUED







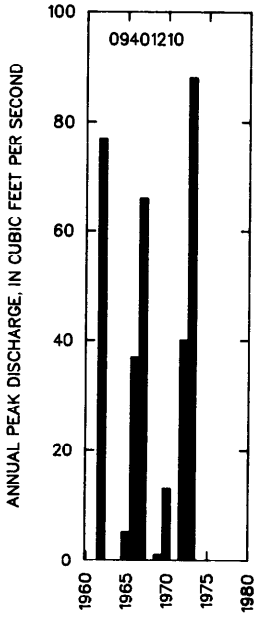
09401210 SLATE MOUNTAIN WASH NEAR FLAGSTAFF, AZ

LOCATION.--Lat 35°30'55", long 111°50'55", in SW¼ sec.26, T.25 N., R.5 E., Cococino County, at U.S. Highway 180, 24 mi northwest of Flagstaff.

DRAINAGE AREA.--5.43 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	77	
1963	00-00-63	0	
1964	00-00-64	0	
1965	10-00-64	5.0	
1966	12-31-65	37	
1967	00-00-67	66	
1968	00-00-68	0	
1969	08-00-69	1.0	LT
1970	00-00-70	13	
1971	00-00-71	0	
1972	06-06-72	40	
1973	04-00-73	88	
1974	00-00-74	0	
1975	00-00-75	0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)=	----
MEAN (LOGS)=	----
STANDARD DEV. (LOGS)=	----

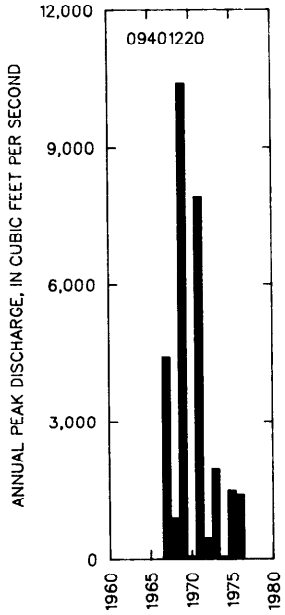
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.4	9.8	7,350	60.0	3.0	19.7	2.1	3.8

09401220 CEDAR WASH NEAR CAMERON, AZ

LOCATION.--Lat 35°51'31", long 111°26'32", in NW¼NW¼ sec.33, T.29 N., R.9 E., Coconino County, Hydrologic Unit 15020016 downstream from State Highway 64 at the Tappan Spring, and 1 mi west of the intersection of State Highway 64 and U.S. Highway 89.

DRAINAGE AREA.--579 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	00-00-67	4,400	
1968	07-00-68	880	
1969	09-11-69	10,400	
1970	09-05-70	50	ES
1971	09-29-71	7,900	
1972	07-18-72	440	
1973	10-19-72	1,950	
1974	09-05-74	50	
1975	09-00-75	1,490	
1976	00-00-76	1,400	

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
1,510	4,550	8,040	14,600	21,400	30,200

WEIGHTED SKEW (LOGS)= -0.08
MEAN (LOGS)= 3.17
STANDARD DEV. (LOGS)= 0.58

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
123	32.4	6,430	37.0	3.0	13.7	1.7	3.1

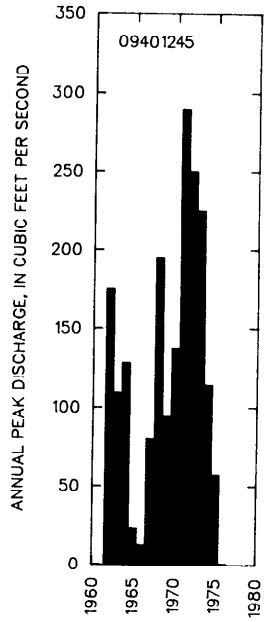
09401245 KLETHLA VALLEY TRIBUTARY NEAR KAYENTA, AZ

LOCATION.--Lat 36°29'53", long 110°37'15", Navajo County, Hydrologic Unit 15020018, at State Highway 64, 15.5 mi southwest of Tsegi Trading Post, and 26 mi southwest of Kayenta.

DRAINAGE AREA.--0.79 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	175	
1963	08-06-63	109	
1964	08-00-64	128	
1965	00-00-65	23	
1966	11-23-65	12	LT
1967	07-30-67	80	
1968	07-25-68	195	
1969	09-00-69	94	
1970	09-05-70	137	
1971	08-00-71	290	
1972	09-02-72	250	
1973	10-00-72	225	
1974	07-22-74	114	
1975	07-11-75	57	
1976	00-00-76	0.3	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
121	193	244	312	365	419

WEIGHTED SKEW (LOGS)= -0.14
MEAN (LOGS)= 2.08
STANDARD DEV. (LOGS)= 0.25

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
87.7	2.3	6,730	21.0	3.0	10.2	1.3	2.8

09401260 MOENKOPI WASH AT MOENKOPI, AZ

LOCATION.--Lat 36°06'18", long 111°12'04", in NW¼NE¼ sec.3, T.31 N., R.11 E., Coconino County, Hydrologic Unit 15020018, in Navajo Indian Reservation on right bank 100 ft upstream from bridge on State Highway 264, 1.3 mi southeast of Moenkopi, 2.5 mi downstream from former gaging station 09401250, and 12.5 mi downstream from Begashibito Wash.

DRAINAGE AREA.--1,629 mi^2, including all closed basins entirely within the drainage area.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1974	07-19-74	2,340
1975	09-13-75	2,380
1976	09-25-76	5,420
1977	07-21-77	4,120
1978	09-25-78	262
1979	11-12-78	330
1980	09-10-80	1,740
1981	07-14-81	4,640
1982	10-02-81	8,010
1983	09-30-83	10,100
1984	08-18-84	9,030
1985	09-12-85	520
1986	09-09-86	7,970
1987	08-24-87	3,990
1988	08-27-88	7,280
1989	08-01-89	3,380

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
24.8	87.1	5,850	47.2	3.0	9.5	1.3	2.6

09401260 MOENKOPI WASH AT MOENKOPI, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1977-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	82	0.25	11	22	2.0	8.5
NOVEMBER	71	1.1	9.9	19	1.9	7.7
DECEMBER	14	0.62	4.1	3.2	0.78	3.2
JANUARY	9.2	2.0	4.3	2.1	0.48	3.4
FEBRUARY	29	2.2	7.4	8.0	1.1	5.8
MARCH	10	2.0	3.8	2.2	0.57	3.0
APRIL	8.5	1.0	2.5	1.9	0.76	1.9
MAY	11	0.31	1.9	2.7	1.4	1.5
JUNE	11	0.00	0.90	2.9	3.3	0.7
JULY	92	0.00	17	28	1.6	13.4
AUGUST	129	0.00	34	37	1.1	26.4
SEPTEMBER	134	0.00	32	38	1.2	24.7
ANNUAL	19	2.2	11	6.0	0.56	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1978-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.67	0.39	0.30	0.24	0.19	0.16
120	1.8	0.77	0.44	0.27	0.15	0.09
183	3.5	1.6	1.0	0.72	0.49	0.38

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1974-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
3,970	7,040	9,330	12,400	14,800	17,300

WEIGHTED SKEW (LOGS)= -0.27
MEAN (LOGS)= 3.58
STANDARD DEV. (LOGS)= 0.31

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1977-89

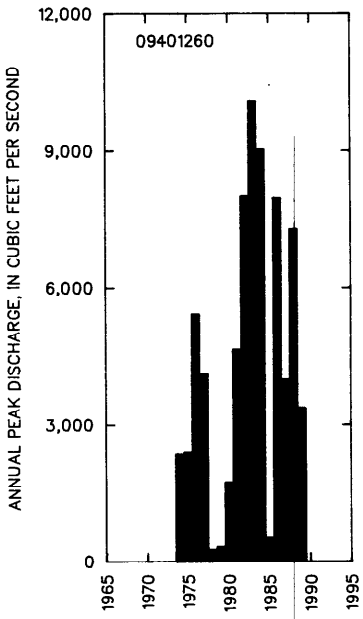
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	766	1,830	2,750	4,080	5,170	6,310
3	406	844	1,140	1,480	1,710	1,910
7	198	397	521	653	734	800
15	104	209	276	351	398	438
30	61	114	145	179	199	215
60	34	66	89	117	138	158
90	25	48	64	83	98	111

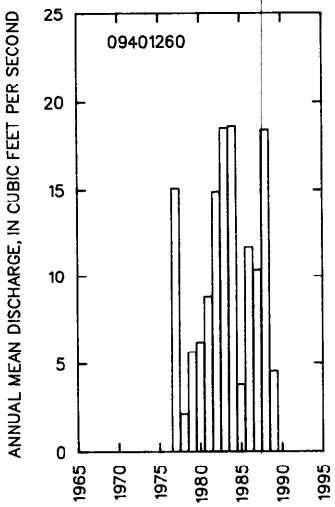
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1977-89

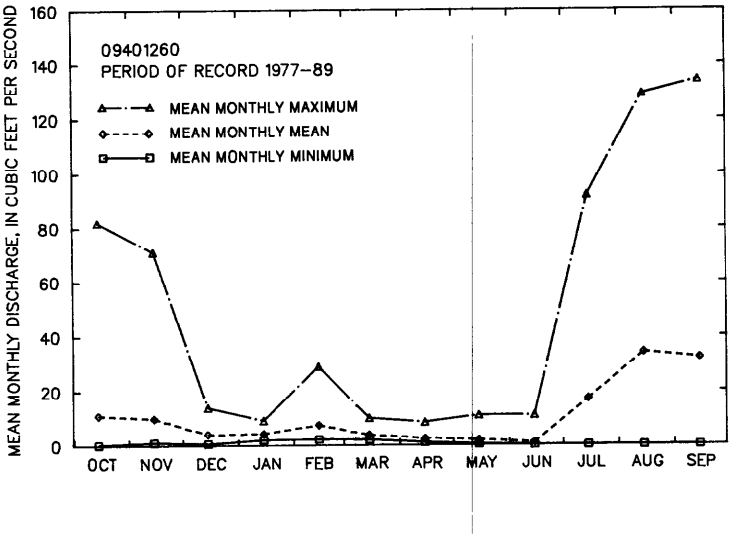
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
173	20	8.0	5.3	4.3	3.2	2.5	2.1	1.5	0.77	0.12	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09401260 MOENKOPI WASH AT MOENKOPI, AZ--CONTINUED







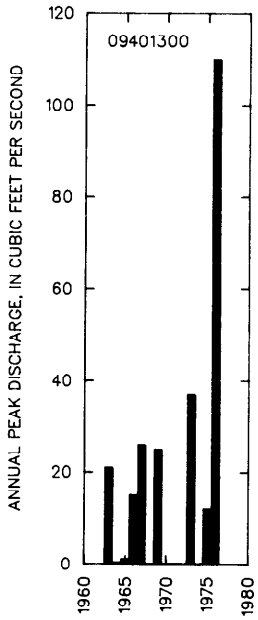
09401300 HAMBLIN WASH TRIBUTARY NEAR CEDAR RIDGE, AZ

LOCATION.--Lat 36°20'55", long 111°30'15", Coconino County, Hydrologic Unit 15020018, at U.S. Highway 89, 3.3 mi south of Cedar Ridge.

DRAINAGE AREA.--0.10 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-07-63	21	
1964	00-00-64	0.3	ES
1965	00-00-65	1.0	LT
1966	07-30-66	15	
1967	09-25-67	26	
1968	00-00-68	0	
1969	09-11-69	25	
1970	00-00-70	0	
1971	00-00-71	0	
1972	00-00-72	0	
1973	10-19-72	37	
1974	00-00-74	0	
1975	09-08-75	12	
1976	00-00-76	110	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
1.7	37.3	156	638	1,480	3,040

WEIGHTED SKEW (LOGS)= -0.48
MEAN (LOGS)= 0.11
STANDARD DEV. (LOGS)= 1.71

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
263	0.61	5,860	0.0	3.0	7.6	1.3	2.4

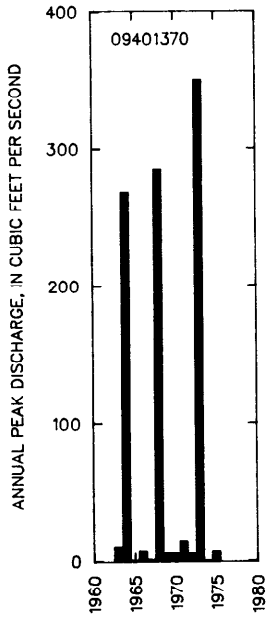
09401370 HAMBLIN WASH TRIBUTARY NO. 2 NEAR TUBA CITY, AZ

LOCATION.--Lat 36°03'20", long 111°23'35", Coconino County, Hydrologic Unit 15020018, at U.S. Highway 89, 10 mi west of Tuba City.

DRAINAGE AREA.--2.16 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	10	LT
1964	00-00-64	268	
1965	00-00-65	0	
1966	10-16-65	7.0	ES
1967	12-06-66	0.5	ES
1968	08-07-68	285	
1969	09-11-69	5.0	LT
1970	10-21-69	5.0	LT
1971	07-00-71	14	ES
1972	07-18-72	5.0	LT
1973	10-19-72	350	
1974	00-00-74	0	
1975	09-00-75	7.0	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
348	2.3	4,670	0.0	3.0	6.0	1.2	2.5

09401400 MOENKOPI WASH NEAR TUBA CITY, AZ

LOCATION.--Lat 36°01'25", long 111°23'48", in sec.35, T.31 N., R.9 E. (unsurveyed), Coconino County, Hydrologic Unit 15020018, on Navajo Indian Reservation, on downstream side of bridge on U.S. Highway 89, 3,500 ft downstream from Hamblin Wash, 11 mi upstream from mouth, and 12 mi southwest of Tuba City.

DRAINAGE AREA.--2,492 mi^2, including all closed basins entirely within the drainage area.

REMARKS.--Diversions above station for irrigation of about 500 acres.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1941	08-16-41	5,240	1966	07-29-66	742
1942	10-13-41	7,000	1967	09-08-67	3,790
1943	08-17-43	7,150	1968	08-12-68	3,120
1944	09-27-44	964	1969	07-29-69	1,900
1945	08-01-45	6,290	1970	09-06-70	4,990
1946	08-12-46	3,910	1971	08-26-71	5,410
1947	08-17-47	2,860	1972	08-27-72	2,510
1948	10-13-47	6,980	1973	10-19-72	12,100
1949	08-09-49	2,210	1974	07-19-74	1,840
1950	07-25-50	2,890	1975	07-15-75	1,200
1951	09-30-51	5,000	1976	09-25-76	3,990
1952	09-21-52	10,000	1977	07-23-77	3,360
1953	07-30-53	5,700	1978	06-28-78	1,710
1965	07-30-65	2,960			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
27.2	88.3	5,820	37.0	2.7	8.7	1.3	2.5

09401400 MOENKOPI WASH NEAR TUBA CITY, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-53, 1966-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	686	0.00	53	141	2.7	29.0
NOVEMBER	7.9	0.33	3.2	1.6	0.50	1.8
DECEMBER	20	0.70	5.0	4.1	0.83	2.8
JANUARY	18	1.0	4.9	3.7	0.75	2.7
FEBRUARY	25	0.80	5.1	5.6	1.1	2.8
MARCH	17	0.43	4.1	4.0	0.96	2.3
APRIL	14	0.00	1.4	3.2	2.2	0.8
MAY	1.1	0.00	0.22	0.34	1.6	0.1
JUNE	12	0.00	1.1	2.9	2.7	0.6
JULY	174	0.00	26	39	1.5	14.3
AUGUST	226	0.69	48	57	1.2	26.5
SEPTEMBER	191	0.00	30	47	1.6	16.3
ANNUAL	62	3.1	15	12	0.81	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-53, 1966-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.12	0.00	0.00	0.00	0.00	0.00
120	1.3	0.47	0.25	0.14	0.07	0.04
183	3.4	1.8	1.3	1.1	0.88	0.78

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-53, 1965-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,740	6,120	7,900	10,400	12,400	14,500

WEIGHTED SKEW (LOGS)= -0.02
MEAN (LOGS)= 3.57
STANDARD DEV. (LOGS)= 0.25

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-53, 1966-78

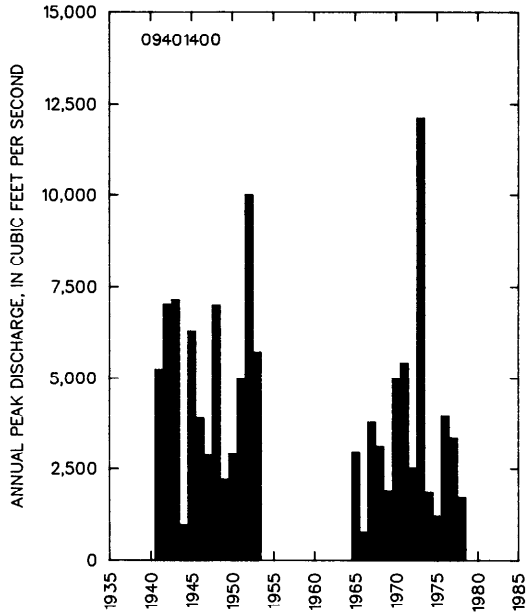
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,030	2,330	3,400	4,910	6,100	7,330
3	513	1,170	1,760	2,670	3,450	4,330
7	272	607	890	1,310	1,650	2,020
15	146	341	514	777	1,000	1,250
30	88	199	295	435	551	675
60	51	112	165	242	306	375
90	36	77	111	160	201	244

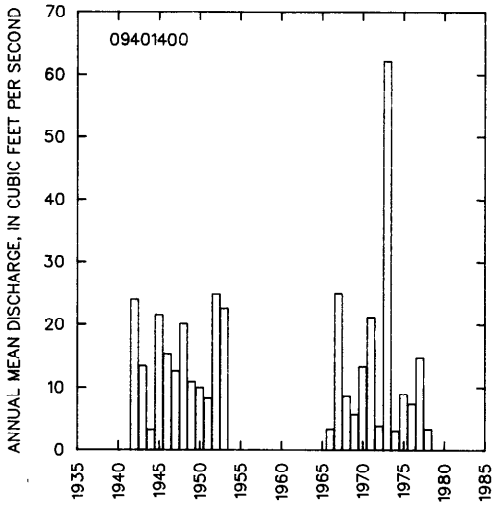
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-53, 1966-78

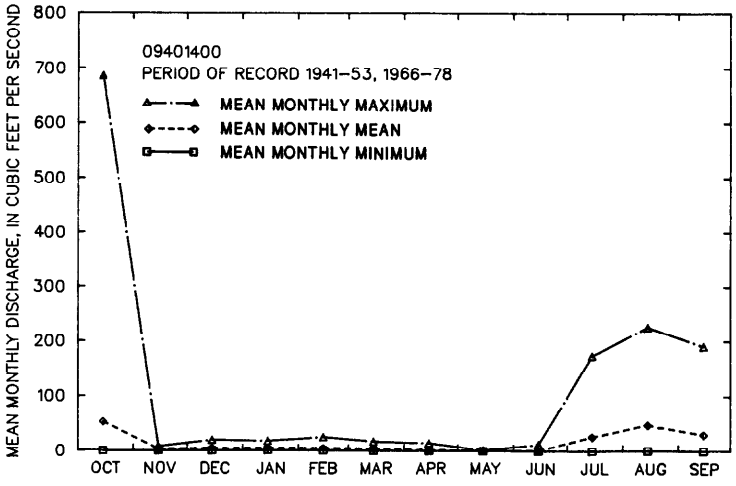
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
306	29	9.5	5.3	4.4	3.2	2.3	1.3	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09401400 MOENKOPI WASH NEAR TUBA CITY, AZ--CONTINUED







09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ

LOCATION.--Lat 35°55'35", long 111°34'00", in NW¼ sec.5, T.29 N., R.8 E. (unsurveyed), Coconino County, Hydrologic Unit 15020016, in Navajo Indian Reservation, on left bank 3 mi downstream from Coconino damsite, 9.5 mi downstream from Moenkopi Wash, 9.5 mi northwest of Cameron, and 45 mi upstream from mouth.

DRAINAGE AREA.--26,459 mi^2, of which 368 mi^2 is noncontributing.

REMARKS.--Diversions above station for irrigation of about 32,000 acres. Some regulation by reservoirs above station (combined capacity of principal reservoirs, about 127,000 acre-ft).

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1923	09-20-23	[1]120,000	ES,HP	1968	08-12-68	5,600	UR
1929	04-06-29	[2]50,000	ES,HP	1969	09-11-69	11,600	UR
1947	08-09-47	21,900		1970	09-07-70	12,600	UR
1948	10-14-47	18,600		1971	08-27-71	7,290	UR
1949	08-09-49	12,400		1972	07-18-72	9,250	UR
1950	07-18-50	4,340		1973	10-19-72	22,400	UR
1951	08-30-51	11,700		1974	00-00-74	1,590	UR
1952	01-21-52	24,900		1975	11-01-74	4,100	UR
1953	07-30-53	6,230		1976	09-25-76	3,870	UR
1954	03-25-54	7,070		1977	08-20-77	3,300	UR
1955	06-13-55	8,990		1978	03-06-78	9,540	UR
1956	08-17-56	6,650		1979	12-23-78	17,800	UR
1957	01-12-57	8,060		1980	02-20-80	12,400	UR
1958	10-14-57	4,840		1981	09-23-81	5,100	UR
1959	08-07-59	4,600		1982	10-02-81	8,320	UR
1960	11-02-59	6,620		1983	09-30-83	10,600	UR
1961	09-09-61	2,600		1984	08-26-84	12,400	UR
1962	02-17-62	3,470		1985	03-16-85	6,030	UR
1963	09-01-63	7,680		1986	11-30-85	6,530	UR
1964	08-02-64	8,540		1987	01-30-87	6,730	UR
1965	01-11-65	6,770	UR	1988	11-01-87	12,600	UR
1966	01-03-66	9,100	UR	1989	08-19-89	12,800	UR
1967	09-08-67	7,580	UR				

[1]Highest since 1870.
[2]Highest since 1923.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
7.48	285	6,300	32.0	2.7	12.2	1.5	2.8

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1948-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4,190	0.00	245	684	2.8	8.5
NOVEMBER	753	0.00	82	172	2.1	2.9
DECEMBER	1,690	0.00	114	284	2.5	4.0
JANUARY	2,030	0.00	172	361	2.1	6.0
FEBRUARY	2,110	0.00	228	382	1.7	7.9
MARCH	1,870	0.00	466	545	1.2	16.2
APRIL	3,970	0.00	640	843	1.3	22.3
MAY	2,880	0.00	154	460	3.0	5.3
JUNE	595	0.00	19	92	4.9	0.7
JULY	616	0.00	120	139	1.2	4.2
AUGUST	2,260	0.00	412	490	1.2	14.3
SEPTEMBER	832	0.00	226	233	1.0	7.9
ANNUAL	1,130	27	240	197	0.82	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1949-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	44	9.4	3.5	1.4	0.44	0.19

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1947-64, 1965-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
8,000	12,600	16,000	20,800	24,700	28,900

WEIGHTED SKEW (LOGS)= 0.12
MEAN (LOGS)= 3.91
STANDARD DEV. (LOGS)= 0.23

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1948-89

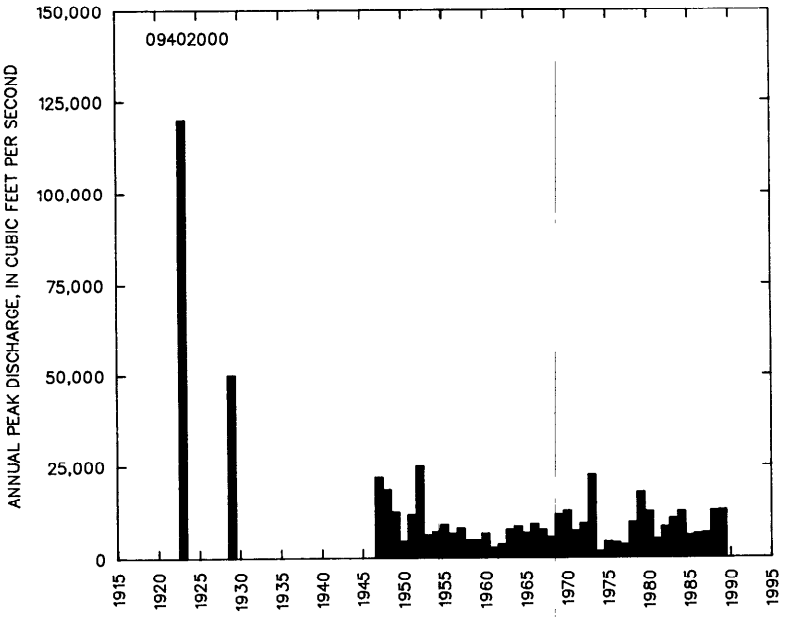
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	4,510	7,880	10,400	13,900	16,600	19,500
3	3,430	6,160	8,260	11,200	13,500	16,000
7	2,280	4,010	5,290	6,990	8,310	9,660
15	1,480	2,520	3,230	4,090	4,710	5,300
30	1,010	1,810	2,380	3,140	3,710	4,290
60	666	1,240	1,660	2,210	2,630	3,050
90	517	989	1,330	1,780	2,120	2,450

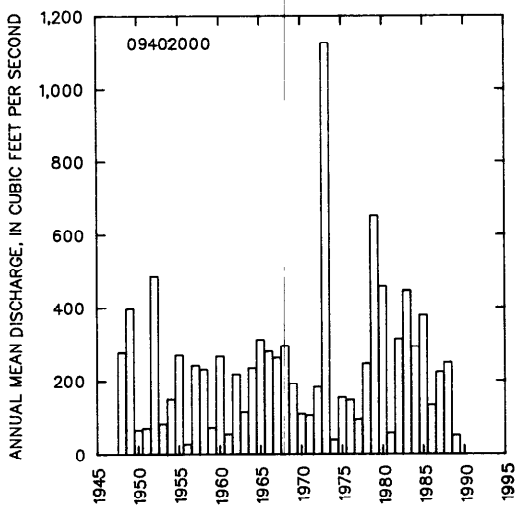
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,630	1,390	675	373	199	67	19	3.1	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

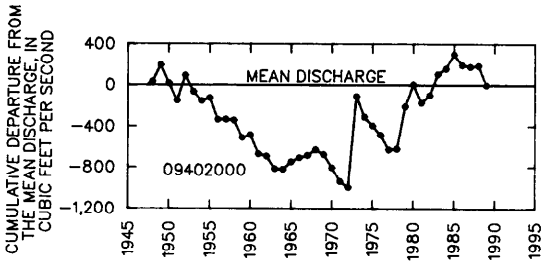
† Reliability of values in column is uncertain, and potential errors are large.

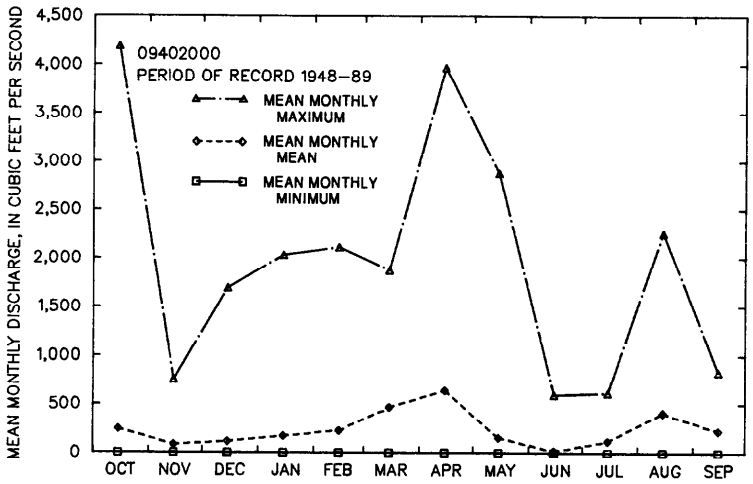
09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--CONTINUED





09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--CONTINUED

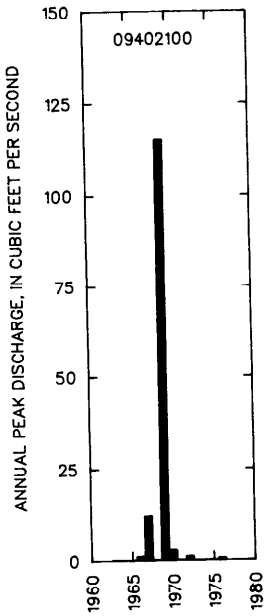




09402100 FOREST BOUNDARY WASH NEAR CAMERON, AZ

LOCATION.--Lat 35°55'25", long 111°44'15", in NE¼SW¼ sec.3, T.29 N., R.6 E., Coconino County, Hydrologic Unit 15020016, at State Highway 64, 0.6 mi inside eastern boundary of Kaibab National Forest, and 18 mi west of Cameron.

DRAINAGE AREA.--0.72 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	0	
1964	00-00-64	0	
1965	00-00-65	0	
1966	00-00-66	1.0	LT
1967	00-00-67	12	
1968	00-00-68	0	
1969	09-11-69	115	
1970	08-00-70	3.0	
1971	00-00-71	0	
1972	07-18-72	1.0	ES
1973	00-00-73	0	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	0.5	ES

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
167	1.6	6,810	94.0	3.0	11.9	1.4	3.2

09402500 COLORADO RIVER NEAR GRAND CANYON, AZ

LOCATION.--Lat 36°06'05", long 112°05'08", in sec.5, T.31 N., R.3 E. (unsurveyed), Coconino County, Hydrologic Unit 15010001, in Grand Canyon National Park, on left bank 0.2 mi upstream from Kaibab Bridge, 0.4 mi upstream from Bright Angel Creek, 4.5 mi northeast of village of Grand Canyon, 26 mi downstream from Little Colorado River, and 267 mi upstream from Hoover Dam.

DRAINAGE AREA.--141,600 mi^2 approximately, including 3,959 mi^2 in Great Divide basin in southern Wyoming which is noncontributing.

REMARKS.--Flow completely regulated by Lake Powell, 104 mi upstream, since Mar. 13, 1963. (See elsewhere in this report.) Many diversions above station for irrigation, municipal, and industrial uses.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1884	07-08-84	300,000	ES,HP	1955	06-14-55	40,400	
1921	06-19-21	220,000		1956	06-06-56	67,200	
1922	06-01-22	115,000	ES	1957	06-13-57	125,000	
1923	09-19-23	112,000		1958	06-02-58	107,700	
1924	06-18-24	74,000		1959	06-19-59	38,300	
1925	06-03-25	53,700		1960	06-10-60	46,300	
1926	05-29-26	85,600		1961	06-06-61	39,800	
1927	07-02-27	127,000		1962	05-17-62	85,600	
1928	06-03-28	115,000		1963	10-22-62	20,700	KR
1929	05-29-29	111,000		1964	04-29-64	19,700	KR
1930	06-04-30	71,000		1965	06-15-65	58,400	KR
1931	05-22-31	34,600		1966	05-04-66	21,300	KR
1932	05-26-32	102,000		1967	09-09-67	23,900	KR
1933	06-05-33	81,500		1968	07-20-68	26,800	KR
1934	05-17-34	25,500		1969	09-12-69	30,800	KR
1935	06-19-35	105,000		1970	08-27-70	27,600	KR
1936	05-24-36	76,300		1971	08-24-71	33,400	KR
1937	05-21-37	85,300		1972	05-26-72	29,500	KR
1938	06-08-38	100,000		1973	04-19-73	38,300	KR
1939	05-26-39	49,000		1974	08-21-74	28,200	KR
1940	05-18-40	46,800		1975	07-30-75	28,900	KR
1941	05-17-41	120,000		1976	05-20-76	27,700	KR
1942	05-31-42	91,800		1977	08-19-77	32,100	KR
1943	06-06-43	66,800		1978	09-09-78	29,400	KR
1944	05-20-44	93,400		1979	12-23-78	38,600	KR
1945	05-17-45	63,300		1980	06-24-80	45,000	KR
1946	06-14-46	50,100		1981	07-30-81	25,400	KR
1947	05-14-47	80,100		1982	08-28-82	27,900	KR
1948	05-26-48	89,800		1983	06-29-83	96,200	KR
1949	06-22-49	112,000		1984	08-13-84	47,600	KR
1950	06-06-50	58,400		1985	06-02-85	47,400	KR
1951	06-01-51	63,700		1986	05-31-86	53,500	KR
1952	06-12-52	122,000		1987	01-31-87	31,600	KR
1953	06-17-53	68,500		1988	07-29-88	25,500	KR
1954	05-27-54	32,800		1989	08-19-89	31,300	KR

09402500 COLORADO RIVER NEAR GRAND CANYON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1964-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	26,300	1,260	11,300	5,060	0.45	6.5
NOVEMBER	25,000	1,280	12,200	5,310	0.44	7.0
DECEMBER	25,200	1,260	13,000	5,610	0.43	7.4
JANUARY	26,300	1,280	14,000	5,520	0.39	8.0
FEBRUARY	27,200	4,260	12,700	5,600	0.44	7.3
MARCH	25,800	5,170	11,900	5,410	0.45	6.8
APRIL	32,200	3,180	14,800	6,850	0.46	8.5
MAY	44,800	3,580	16,800	10,600	0.63	9.6
JUNE	55,900	1,290	18,700	12,900	0.69	10.7
JULY	55,600	1,370	17,300	10,200	0.59	9.9
AUGUST	29,700	4,660	16,900	5,770	0.34	9.7
SEPTEMBER	27,900	3,200	15,000	5,590	0.37	8.6
ANNUAL	28,600	3,760	14,500	5,560	0.38	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	3,290	2,080	1,620	1,300	1,020	857
3	4,490	2,700	2,000	1,540	1,120	891
7	5,830	3,500	2,570	1,930	1,370	1,070
14	7,090	4,260	3,080	2,290	1,580	1,210
30	8,560	5,160	3,670	2,650	1,760	1,300
60	10,200	6,120	4,240	2,960	1,860	1,310
90	11,200	6,890	4,930	3,570	2,360	1,730
120	11,600	7,660	5,860	4,570	3,340	2,660
183	12,400	8,580	6,820	5,520	4,250	3,520

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-89

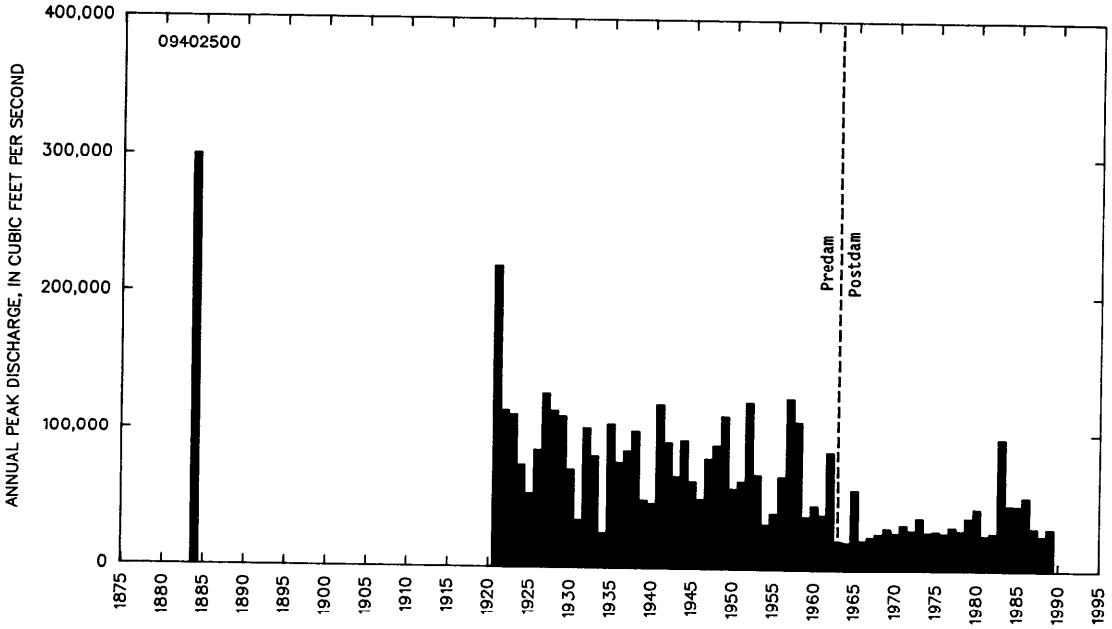
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	25,600	37,400	48,300	66,600	84,100	106,000
3	24,500	36,300	47,100	65,300	82,700	104,000
7	22,800	34,500	45,500	64,400	82,800	106,000
15	21,500	32,600	42,900	60,200	77,100	98,000
30	20,400	30,800	40,400	56,100	71,200	89,600
60	19,100	28,100	36,000	48,700	60,400	74,300
90	17,900	25,900	32,500	42,500	51,300	61,400

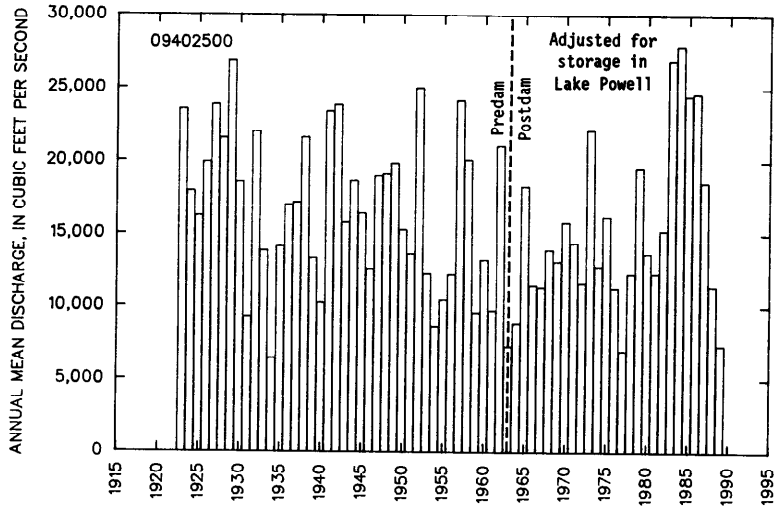
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-89

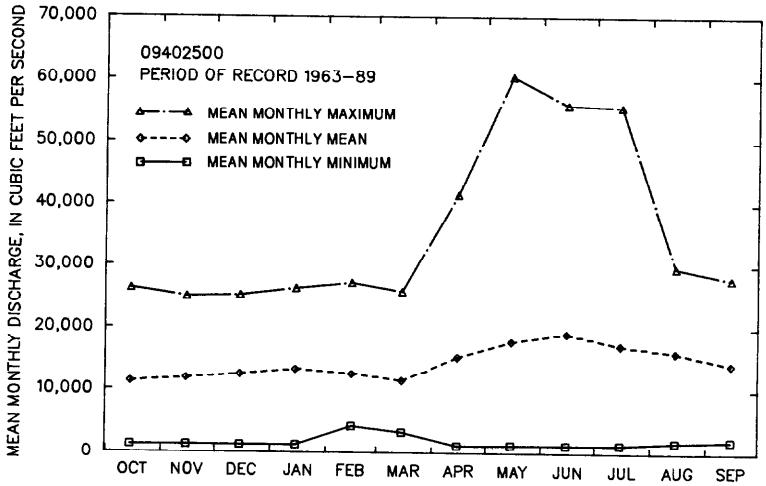
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
46,400	28,800	24,900	21,800	19,500	16,600	14,700	13,100	11,600	10,100	8,530	6,380	4,150	1,460	1,250	1,220	1,190

† Reliability of values in column is uncertain, and potential errors are large.

09402500 COLORADO RIVER NEAR GRAND CANYON, AZ--CONTINUED







BRIGHT ANGEL CREEK BASIN

09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, AZ

LOCATION.--Lat 36°06'11", long 112°05'44", in sec.5, T.31 N., R.3 E., (unsruveyed) Coconino County, Hydrologic Unit 1501001, in Grand Canyon National Park, on right bank 0.4 mi upstream from mouth and 4 mi northeast of Grand Canyon.

DRAINAGE AREA.--101 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1924	09-10-24	530		1949	04-28-49	206	
1925	09-17-25	122		1950	10-18-49	197	
1926	07-27-26	1,000		1951	08-29-51	193	
1927	09-16-27	1,000		1952	05-05-52	672	
1928	05-03-28	187		1953	08-27-53	930	
1929	07-10-29	173		1954	03-23-54	446	
1930	02-23-30	113		1955	06-13-55	103	
1931	06-25-31	45		1956	01-27-56	77	
1932	02-09-32	500		1957	08-05-57	1,770	
1933	08-07-33	186		1958	08-22-58	900	ES
1934	10-09-33	250		1959	08-11-59	660	
1935	07-20-35	270		1960	06-06-60	240	
1936	08-19-36	4,400		1961	08-30-61	266	
1937	07-29-37	2,000		1962	02-08-62	240	
1938	04-21-38	575		1963	08-17-63	855	
1939	09-06-39	270		1964	08-26-64	353	
1940	08-24-40	602		1965	08-15-65	788	
1941	05-13-41	848		1966	11-23-65	484	
1942	04-23-42	264		1967	12-06-66	4,000	
1943	04-23-43	426		1968	07-07-68	240	
1944	05-15-44	199		1969	01-25-69	930	
1945	07-30-45	297		1970	03-01-70	1,180	
1946	07-22-46	840		1971	07-19-71	2,300	
1947	08-27-47	310		1972	07-25-72	126	
1948	08-11-48	1,900		1973	05-12-73	578	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
421.0	17.6	7,390	53.0	2.2	19.8	2.5	4.3

09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1924-73

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	34	15	21	4.1	0.20	5.0
NOVEMBER	34	15	21	4.2	0.20	5.1
DECEMBER	181	16	25	23	0.90	6.0
JANUARY	33	16	22	4.0	0.18	5.3
FEBRUARY	51	16	24	7.6	0.31	5.8
MARCH	64	16	27	9.8	0.36	6.5
APRIL	217	15	77	51	0.66	18.3
MAY	501	14	103	106	1.0	24.4
JUNE	131	14	34	23	0.67	8.0
JULY	44	13	23	5.8	0.25	5.5
AUGUST	41	13	22	4.7	0.21	5.2
SEPTEMBER	45	14	21	5.6	0.26	5.1
ANNUAL	89	15	35	15	0.44	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1925-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	17	14	13	12	11	11
3	17	14	13	12	11	11
7	17	15	13	12	12	11
14	18	15	14	13	12	12
30	18	16	15	14	13	12
60	19	16	15	14	13	13
90	19	17	16	15	14	13
120	20	17	16	15	14	13
183	20	18	16	15	14	14

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1924-73

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
435	1,010	1,600	2,640	3,670	4,970

WEIGHTED SKEW (LOGS)= 0.18
MEAN (LOGS)= 2.65
STANDARD DEV. (LOGS)= 0.43

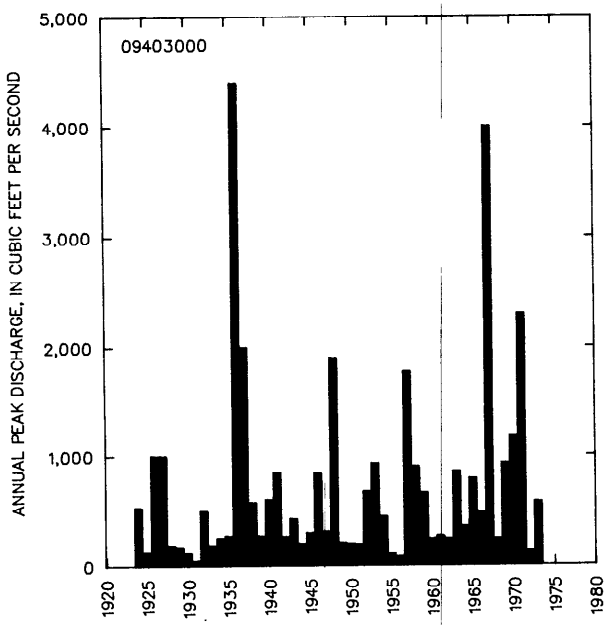
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1924-73

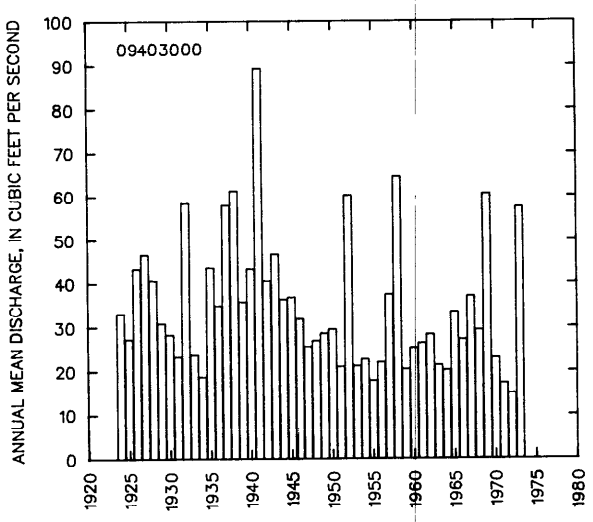
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	148	339	539	907	1,290	1,780
3	137	309	476	760	1,030	1,360
7	126	281	424	654	863	1,110
15	112	242	360	546	712	902
30	94	195	284	422	544	681
60	72	138	194	281	357	444
90	58	104	143	203	256	315

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1924-73

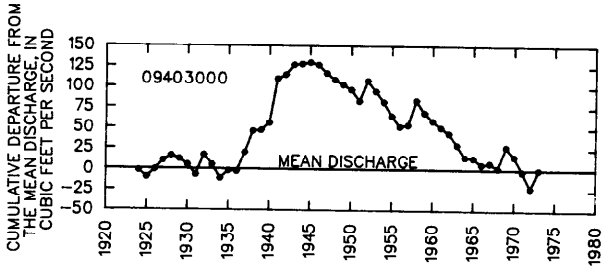
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
294	100	54	37	32	27	25	23	22	20	19	17	16	15	14	13	12

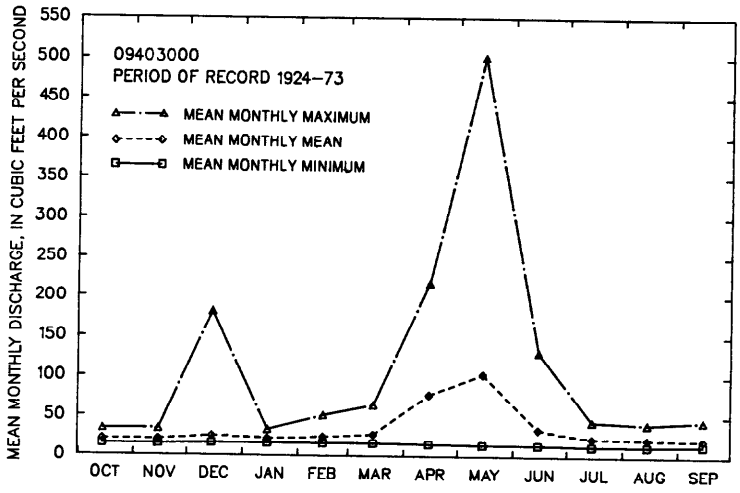
09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, AZ--CONTINUED





09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, AZ--CONTINUED





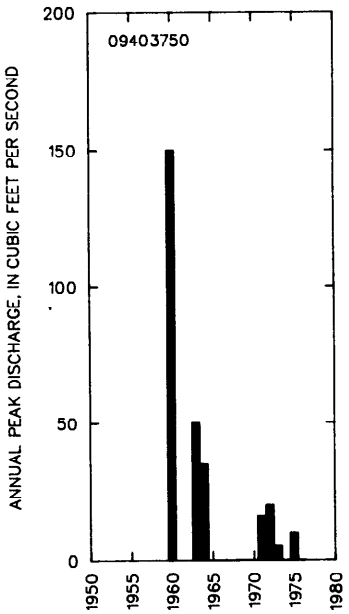
09403750 SAGEBRUSH DRAW NEAR FREDONIA, AZ

LOCATION.--Lat 36°54'05", long 112°22'35", in NE¼NE¼ sec.3, T.40 N., R.1 W. (unsurveyed), Coconino County, Hydrologic Unit 1501003, at U.S. Highway 89 Alt., 9.5 mi east of Fredonia.

DRAINAGE AREA.--0.68 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	00-00-60	150	HP
1963	08-30-63	50	ES
1964	07-14-64	35	ES
1965	00-00-65	0	
1966	00-00-66	0	
1967	00-00-67	0	
1968	00-00-68	0	
1969	00-00-69	0	
1970	00-00-70	0	
1971	02-00-71	16	ES
1972	06-22-72	20	ES
1973	10-19-72	5.0	ES
1974	00-00-74	0	
1975	08-21-75	10	LT
1976	00-00-76	0.1	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
106	2.3	5,290	0.0	3.0	12.0	1.4	3.2

09403780 KANAB CREEK NEAR FREDONIA, AZ

LOCATION.--Lat 36°51'50", long 112°34'45", in SE¼ sec.14, T.40 N., R.3 W. (unsurveyed), Coconino County, Hydrologic Unit 15010003, in Kaibab Indian Reservation, at Nagles Crossing, on left bank 0.2 mi downstream from Johnson Wash and 6.5 mi southwest of Fredonia.

DRAINAGE AREA.--1,085 mi^2.

REMARKS.--Diversions upstream for irrigation of about 1,400 acres in Utah and 800 acres in Arizona in 1967.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1550	00-00-50	[1]15,000	ES,PF
1964	08-13-65	([2])	
1965	04-18-65	250	
1966	03-08-66	668	
1967	12-07-66	2,960	
1968	07-31-68	1,130	
1969	07-23-69	1,330	
1970	08-18-70	4,630	
1971	08-18-71	1,340	
1972	09-19-72	1,680	
1973	04-14-73	660	
1974	07-23-74	84	
1975	07-13-75	603	
1976	09-25-76	410	
1977	07-23-77	435	
1978	04-11-78	460	
1979	02-14-79	2,020	
1980	02-20-80	957	

[1]Highest since 1488, Smith.
[2]Discharge not determined.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.4	49.6	6,100	60.0	3.0	12.0	1.5	3.0

09403780 KANAB CREEK NEAR FREDONIA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1964-80

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	19	0.00	1.8	4.6	2.6	2.2
NOVEMBER	16	0.00	2.2	5.1	2.3	2.7
DECEMBER	58	0.00	7.3	15	2.0	8.9
JANUARY	30	0.00	5.9	8.2	1.4	7.2
FEBRUARY	49	0.00	9.9	14	1.5	12.2
MARCH	90	0.00	17	24	1.5	20.5
APRIL	80	0.00	21	30	1.4	25.8
MAY	6.5	0.00	0.71	1.6	2.3	0.9
JUNE	0.77	0.00	0.05	0.19	3.5	0.1
JULY	20	0.00	3.5	6.4	1.8	4.3
AUGUST	48	0.00	7.6	14	1.9	9.4
SEPTEMBER	29	0.00	4.8	8.6	1.8	5.9
ANNUAL	18	0.78	6.8	5.2	0.77	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-80

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.02	0.00	0.00	0.00	0.00	0.00
120	0.21	0.09	0.00	0.00	0.00	0.00
183	0.92	0.21	0.09	0.04	0.02	0.01

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1550, 1965-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
875	1,760	2,610	4,050	5,440	7,140

WEIGHTED SKEW (LOGS)= 0.34
MEAN (LOGS)= 2.96
STANDARD DEV. (LOGS)= 0.35

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-80

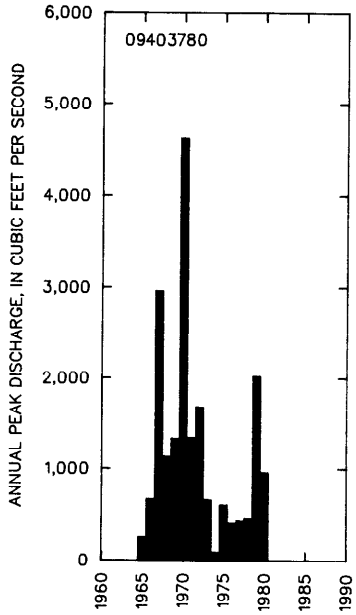
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	223	482	679	936	1,130	1,310
3	139	290	397	529	620	704
7	85	179	244	319	369	414
15	50	116	166	232	280	327
30	32	74	108	154	188	221
60	19	46	67	97	119	142
90	14	35	53	78	99	121

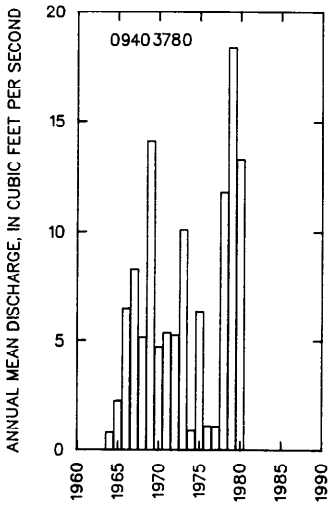
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-80

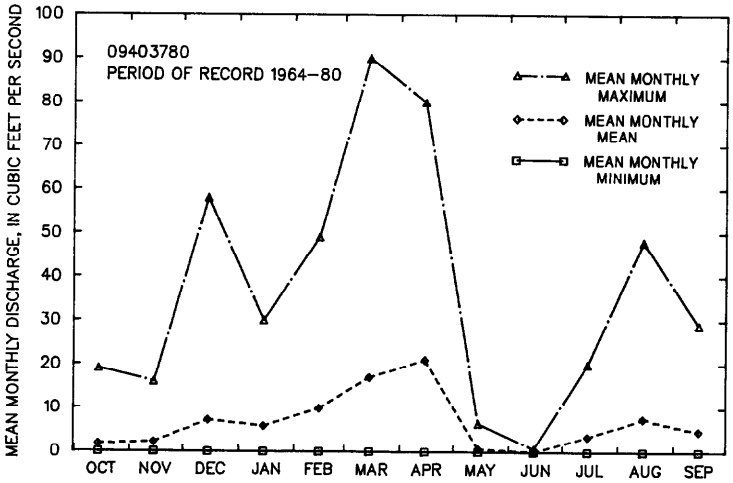
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
146	28	11	5.5	2.9	0.69	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09403780 KANAB CREEK NEAR FREDONIA, AZ--CONTINUED







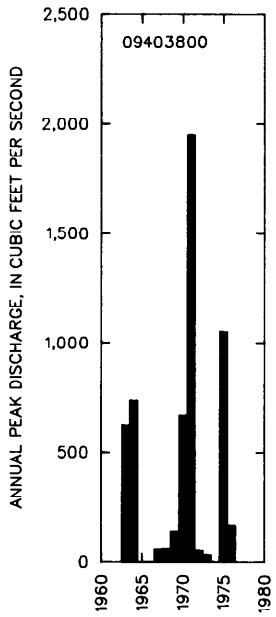
09403800 BITTER SEEPS WASH TRIB NEAR FREDONIA, AZ

LOCATION.--Lat 36°51'25", long 112°45'30", in NE¼ sec.19, T.40 N., R.4 W., Mohave County, at State Highway 389, 1 mi west of Pipe Spring National Monument, and 14 mi southwest of Fredonia.

DRAINAGE AREA.--2.85 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-30-63	622	
1964	07-24-64	736	
1965	00-00-65	0	
1966	00-00-66	0	
1967	09-23-67	55	
1968	07-31-68	57	
1969	08-29-69	137	
1970	08-18-70	670	
1971	08-23-71	1,950	
1972	09-20-72	50	ES
1973	10-19-72	30	
1974	00-00-74	0	
1975	07-08-75	1,050	
1976	00-00-76	165	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
127	575	1,240	2,780	4,660	7,350

WEIGHTED SKEW (LOGS)= -0.11
MEAN (LOGS)= 2.09
STANDARD DEV. (LOGS)= 0.79

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
129	2.9	5,120	40.0	3.0	12.0	1.5	3.2

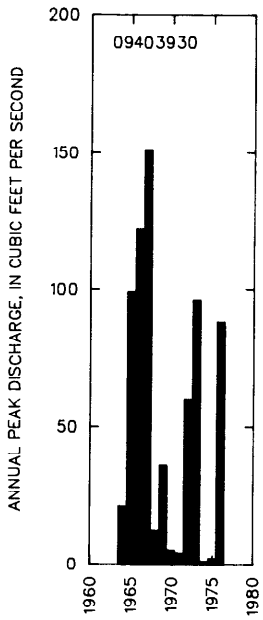
09403930 WEST CATARACT CREEK NEAR WILLIAMS, AZ

LOCATION.--Lat 35°14'52", long 112°13'28", in NW¼ sec.31, T.22 N., R.2 E., Coconino County, Hydrologic Unit 15010004, at Country Club Road, 0.25 mi above Cataract Lake, and 1 mi west of Williams city limits.

DRAINAGE AREA.--3.18 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-26-64	21	
1965	04-00-65	99	
1966	11-25-65	122	
1967	12-06-66	151	
1968	00-00-68	12	
1969	03-00-69	36	
1970	00-00-70	5.0	
1971	00-00-71	4.0	
1972	12-26-71	60	
1973	10-00-72	96	
1974	07-00-74	1.0	LT
1975	04-00-75	2.0	
1976	00-00-76	88	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
26.2	96.4	181	342	505	708

WEIGHTED SKEW (LOGS)= -0.34
MEAN (LOGS)= 1.38
STANDARD DEV. (LOGS)= 0.71

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
465	3.9	7,190	82.0	3.0	23.5	2.0	4.2

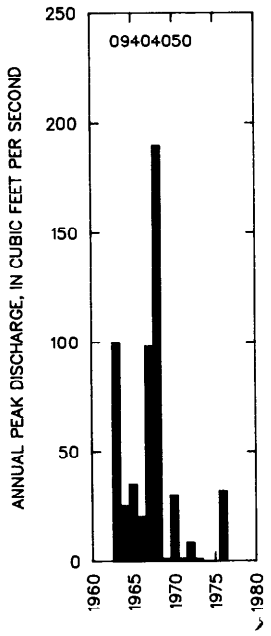
09404050 SPRING VALLEY WASH TRIBUTARY NEAR WILLIAMS, AZ

LOCATION.--Lat 35°34'28", long 112°09'12", in SW¼ sec.2, T.25 N., R.2 E., Coconino County, Hydrologic Unit 15010004, at State Highway 64, 6 mi southeast of Valle, and 22.5 mi north of Williams.

DRAINAGE AREA.--5.00 mi^2, of which 1.07 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-24-63	100	
1964	07-00-64	25	ES
1965	09-06-65	35	ES
1966	00-00-66	20	ES
1967	00-00-67	98	
1968	00-00-68	190	
1969	00-00-69	1.0	ES
1970	07-22-70	30	ES
1971	00-00-71	1.0	LT
1972	07-17-72	8.0	LT
1973	00-00-73	1.0	LT
1974	00-00-74	0	
1975	00-00-75	0	
1976	09-26-76	32	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
17.7	61.2	113	213	317	449

WEIGHTED SKEW (LOGS)= -0.23
MEAN (LOGS)= 1.22
STANDARD DEV. (LOGS)= 0.66

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
40.5	2.4	6,750	9.2	3.0	12.2	1.5	3.3

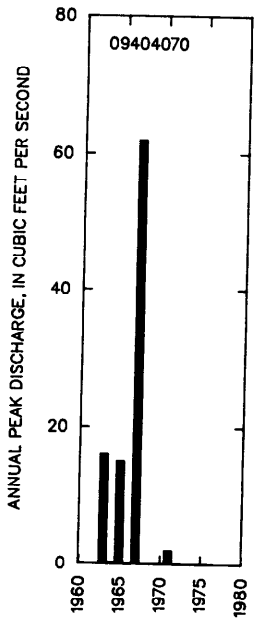
09404070 LITTLE RED HORSE WASH NEAR GRAND CANYON, AZ

LOCATION.--Lat 35°50'45", long 112°07'55", in NW¼ sec.1, T.28 N., R.2 E., Coconino County, Hydrologic Unit 15010004, at State Highway 64, 0.1 mi south of road to Old Grand Canyon airport, and 15 mi south of Grand Canyon Village.

DRAINAGE AREA.--21.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-24-63	16	
1964	00-00-64	0.1	
1965	10-17-64	15	
1966	00-00-66	0	
1967	00-00-67	62	
1968	00-00-68	0	
1969	00-00-69	0	
1970	00-00-70	0	
1971	00-00-71	2.0	ES
1972	00-00-72	0	
1973	00-00-73	0	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.9	9.6	6,780	87.0	3.0	13.2	1.7	3.3

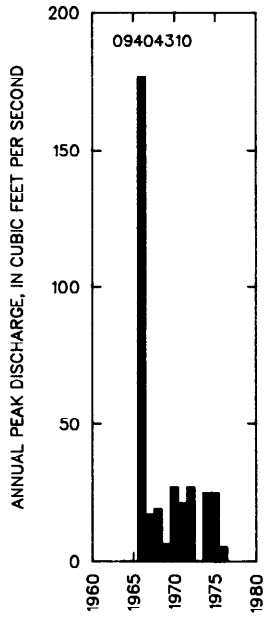
09404310 YAMPAI CANYON TRIBUTARY NEAR PEACH SPRINGS, AZ

LOCATION.--Lat 35°33'07", long 113°23'17", in SE¼NW¼ sec.18, T.25 N., R.10 W., Mohave County, Hydrologic Unit 15010002, at U.S. Highway 66, 2.8 mi northeast of the Peach Springs Post Office.

DRAINAGE AREA.--0.20 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	00-00-64	0	
1965	00-00-65	0	
1966	07-30-66	177	
1967	09-03-67	17	
1968	08-04-68	19	
1969	07-29-69	6.0	ES
1970	07-00-70	27	
1971	08-10-71	21	
1972	08-12-72	27	
1973	00-00-73	0	
1974	07-21-74	25	ES
1975	07-06-75	25	
1976	00-00-76	5.0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
13.8	37.2	63.5	114	167	237

WEIGHTED SKEW	(LOGS)=	0.16
MEAN	(LOGS)=	1.15
STANDARD DEV.	(LOGS)=	0.50

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
444	0.30	5,360	0.0	3.0	12.2	1.5	3.4

09404340 TRUXTON WASH AT VALENTINE, AZ

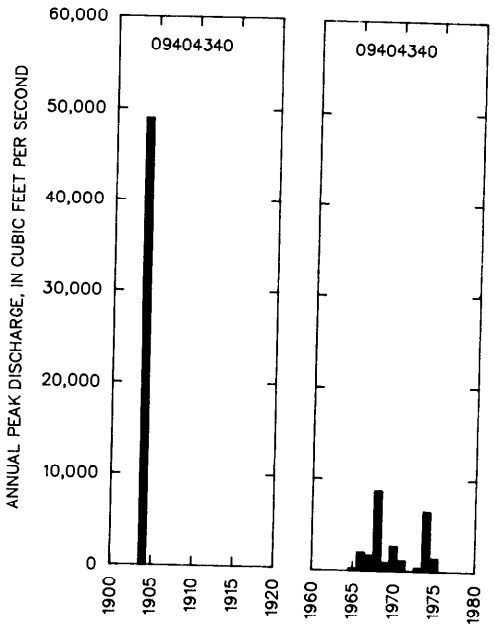
LOCATION.--Lat 35°23'10", long 113°39'20", in SE¼ sec.10, T.23 N., R.13 W., Mohave County, Hydrologic Unit 15010007, in Hualapai Indian Reservation, at Valentine.

DRAINAGE AREA.--370 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1904	07-30-04	[1]49,000	ES,HP
1965	07-29-65	250	
1966	08-18-66	1,960	
1967	09-15-67	1,640	
1968	08-04-68	8,760	
1969	07-19-69	900	
1970	07-22-70	2,650	
1971	08-21-71	1,130	
1972	09-19-72	40	
1973	07-08-73	380	
1974	07-20-74	6,500	
1975	00-00-75	1,400	
1976	00-00-76	5.0	ES

[1]Highest since 1898.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1904, 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
1,150	3,510	6,330	12,000	18,100	26,300

WEIGHTED SKEW (LOGS)= 0.06
MEAN (LOGS)= 3.07
STANDARD DEV. (LOGS)= 0.57

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
57.0	30.4	4,630	72.0	2.0	12.1	1.5	3.5

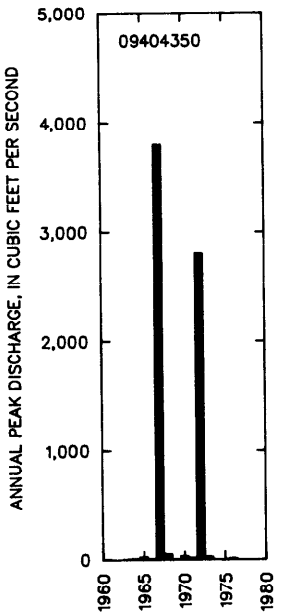
09404350 VALENTINE WASH AT VALENTINE, AZ

LOCATION.--Lat 35°23'00", long 113°39'45", in NW¼ sec.15, T.23, R.13 W., Mohave County, Hydrologic Unit 15010007, at U.S. Highway 66, 0.3 mi southwest of Valentine.

DRAINAGE AREA.--3.15 mi^2

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	0	
1964	08-00-64	5.0	ES
1965	10-17-64	20	ES
1966	12-09-65	4.0	ES
1967	08-20-67	3,800	
1968	08-04-68	50	ES
1969	07-29-69	2.0	LT
1970	07-00-70	30	ES
1971	00-00-71	15	ES
1972	08-12-72	2,800	
1973	03-12-73	25	ES
1974	00-00-74	0	
1975	00-00-75	1.0	ES
1976	00-00-76	10	LT



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
12.7	142	552	2,540	7,090	18,400

WEIGHTED SKEW (LOGS)= 0.37
MEAN (LOGS)= 1.18
STANDARD DEV. (LOGS)= 1.19

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
378	3.1	4,490	63.0	1.0	12.1	1.5	3.5

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ

LOCATION.--Lat 36°53'30", long 113°55'25", in SW¼SW¼ sec.4, T.40 N., R.15 W., Mohave County, Hydrologic Unit 15010010, on right bank 0.5 mi downstream from Beaver Dam Wash, 0.4 mi upstream from Littlefield, and 36 mi upstream from waterline of Lake Mead at altitude 1,221 ft, National Geodetic Vertical Datum of 1929.

DRAINAGE AREA.--5,090 mi^2, approximately.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1930	08-09-30	6,500		1960	11-03-59	2,320	
1931	11-18-30	3,000		1961	09-18-61	10,900	
1932	08-27-32	18,000		1962	02-12-62	5,380	
1933	05-01-33	1,500		1963	09-14-63	4,720	
1934	12-14-33	1,220		1964	08-14-64	6,300	
1935	08-16-35	1,900		1965	09-06-65	4,040	
1936	07-10-36	2,710		1966	12-30-65	5,490	
1937	02-07-37	1,440		1967	12-06-66	35,200	
1938	03-03-38	22,000		1968	08-08-68	2,180	
1939	09-12-39	13,000		1969	01-26-69	21,400	
1940	09-18-40	11,000		1970	07-22-70	8,960	
1941	03-02-41	6,000		1971	08-15-71	6,140	
1942	10-13-41	3,740		1972	12-25-71	8,180	
1943	03-11-43	2,660		1973	05-11-73	3,740	
1944	05-09-44	1,900		1974	09-05-74	5,840	
1945	02-03-45	4,170		1975	07-30-75	5,910	
1946	08-12-46	5,010		1976	02-09-76	5,180	
1947	10-29-46	9,400		1977	10-02-76	7,140	
1948	09-16-48	1,090		1978	03-02-78	22,000	
1949	09-10-49	2,290		1979	03-28-79	4,440	
1950	07-18-50	3,450		1980	02-20-80	10,380	
1951	08-04-51	12,000		1981	07-16-81	2,260	
1952	12-30-51	7,170		1982	09-27-82	4,840	
1953	08-27-53	5,490		1983	12-01-82	6,200	
1954	08-04-54	6,020		1984	07-23-84	4,940	
1955	08-25-55	19,800		1985	04-11-85	1,260	
1956	01-27-56	2,460		1986	11-30-85	1,970	
1957	08-21-57	3,950		1987	07-21-87	5,690	
1958	03-17-58	7,180		1988	08-03-88	8,280	ES
1959	08-19-59	3,490		1989	01-01-89	61,000	DF

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
38.4	112	5,500	50.0	3.0	16.0	1.8	3.4

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1930-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	602	53	147	92	0.63	5.1
NOVEMBER	552	102	193	80	0.41	6.7
DECEMBER	1,250	111	230	153	0.67	7.9
JANUARY	775	108	232	110	0.47	8.0
FEBRUARY	2,330	119	315	321	1.0	10.9
MARCH	1,710	85	349	344	0.99	12.1
APRIL	1,390	62	416	374	0.90	14.4
MAY	2,120	55	427	515	1.2	14.8
JUNE	1,120	47	137	159	1.2	4.7
JULY	381	52	109	73	0.67	3.8
AUGUST	976	50	188	175	0.93	6.5
SEPTEMBER	737	53	148	133	0.90	5.1
ANNUAL	697	108	240	132	0.55	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1931-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	56	50	47	44	41	40
3	57	50	47	45	42	41
7	58	51	48	46	44	42
14	59	53	50	49	47	46
30	61	55	53	52	51	51
60	68	59	56	54	53	52
90	84	65	58	55	54	53
120	94	71	64	59	55	54
183	122	93	82	74	67	63

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1930-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,070	10,600	16,000	25,400	34,600	46,000

WEIGHTED SKEW (LOGS)= 0.32
MEAN (LOGS)= 3.72
STANDARD DEV. (LOGS)= 0.37

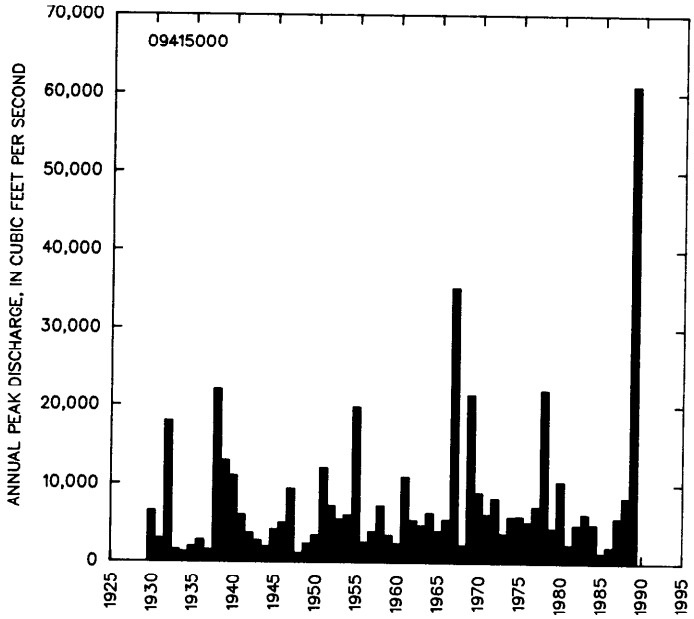
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1930-89

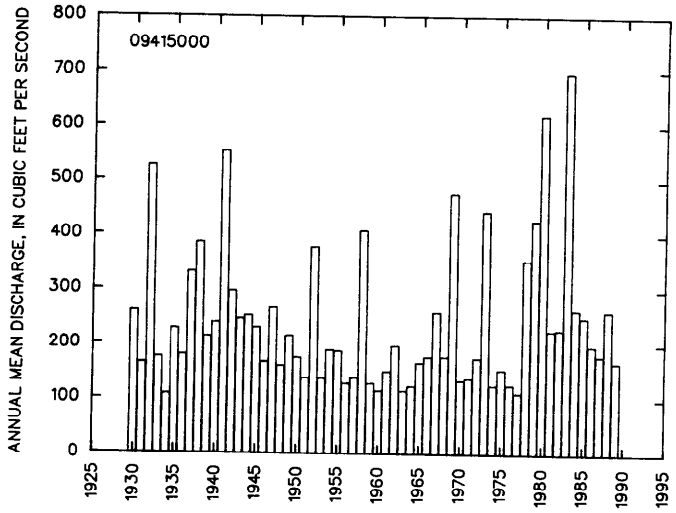
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,190	4,470	6,910	11,500	16,500	23,200
3	1,380	2,820	4,390	7,430	10,800	15,400
7	924	1,850	2,810	4,570	6,400	8,800
15	676	1,300	1,910	2,980	4,040	5,380
30	518	968	1,400	2,120	2,830	3,720
60	404	743	1,070	1,620	2,160	2,840
90	352	636	907	1,370	1,830	2,410

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-89

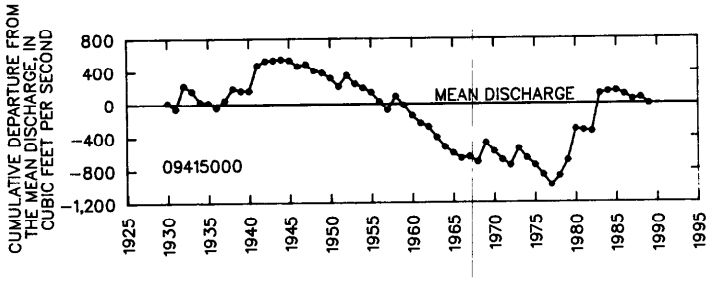
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,870	760	428	319	270	216	180	149	115	84	68	60	56	51	49	48	42

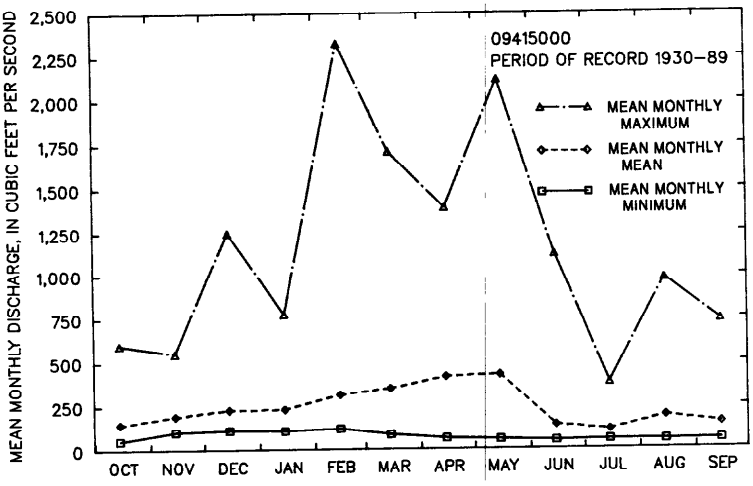
09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--CONTINUED





09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--CONTINUED





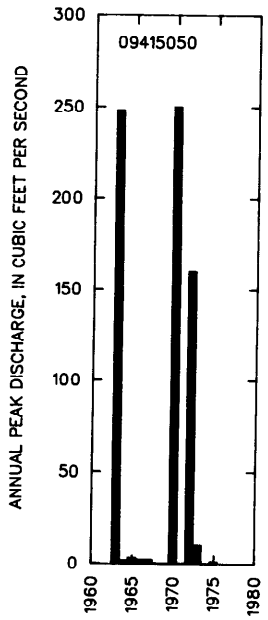
09415050 BIG BEND WASH TRIBUTARY NEAR LITTLEFIELD, AZ

LOCATION.--Lat 36°51'45", long 113°58'05", in SE¼ sec.13, T.40 N., R.16 W., Mohave County, Hydrologic Unit 15010010, at U.S. Highway 91, 2.7 mi southwest of Littlefield.

DRAINAGE AREA.--7.27 mi^2.

ANNAUL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-18-63	248	
1964	07-00-64	1.5	ES
1965	08-00-65	3.0	ES
1966	11-23-65	2.0	ES
1967	12-06-66	2.0	ES
1968	00-00-68	0.1	LT
1969	00-00-69	0	
1970	00-00-70	250	
1971	00-00-71	0	
1972	09-19-72	160	
1973	10-09-72	10	ES
1974	00-00-74	0	
1975	11-00-74	1.0	LT



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
1.7	32.8	152	759	2,120	5,300

WEIGHTED SKEW (LOGS)=	-0.09
MEAN (LOGS)=	0.20
STANDARD DEV. (LOGS)=	1.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
55.8	7.4	2,240	0.0	3.0	7.6	1.5	3.6

DETRITAL WASH BASIN

09419590 DETRITAL WASH TRIBUTARY NEAR CHLORIDE, AZ

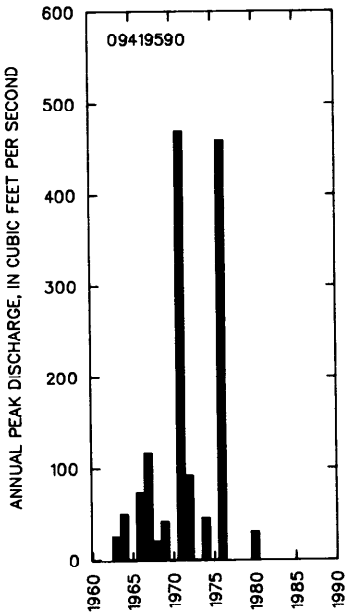
LOCATION.--Lat 35°25'55", long 114°17'05", in NW¼ sec.35, T.24 N., R.19 W., Mohave County, Hydrologic Unit 15010014, at U.S. Highway 93, 5.5 mi northwest of Chloride.

DRAINAGE AREA.--1.23 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-17-63	25	ES
1964	08-12-64	50	ES
1965	04-03-65	0.2	ES
1966	08-16-66	73	
1967	09-00-67	117	
1968	00-00-68	20	ES
1969	07-27-69	42	
1970	00-00-70	0	
1971	08-12-71	470	
1972	09-19-72	92	
1973	00-00-73	0	
1974	07-21-74	46	
1975	00-00-75	0	
1976	09-10-76	460	
1980	00-00-80	[1]30	ES,HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
41.4	126	233	457	715	1,080

WEIGHTED SKEW (LOGS)=	0.23
MEAN (LOGS)=	1.64
STANDARD DEV. (LOGS)=	0.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
200	2.4	3,710	0.0	3.0	10.1	1.4	3.6

09421800 RINGBOLT WASH NEAR HOOVER DAM, AZ

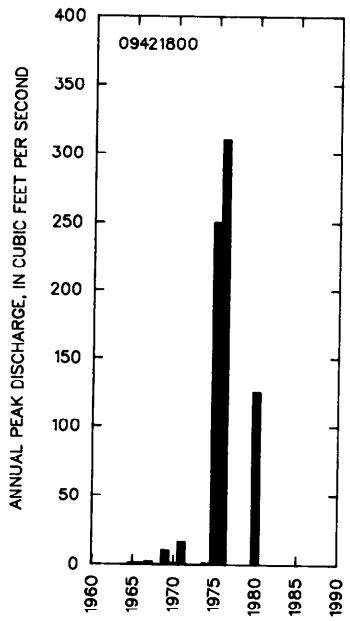
LOCATION.--Lat 35°58'05", long 114°41'00", in SW¼ sec.19, T.30 N., R.22 W., Mohave County, Hydrologic Unit 15030101, at U.S. Highway 93, 5.9 mi southeast of Hoover Dam.

DRAINAGE AREA.--1.21 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	00-00-64	0	
1965	04-03-65	1.0	ES
1966	12-00-65	1.0	ES
1967	08-00-67	2.0	ES
1968	00-00-68	0	
1969	00-00-69	10	ES
1970	08-00-70	1.0	ES
1971	00-00-71	16	ES
1972	00-00-72	0	
1973	00-00-73	0	
1974	07-19-74	1.0	LT
1975	08-19-75	250	ES
1976	09-08-76	310	
1980	00-00-80	[1]125	HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)=	---
MEAN (LOGS)=	---
STANDARD DEV. (LOGS)=	---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
428	3.0	2,590	0.0	1.0	5.8	1.4	3.6

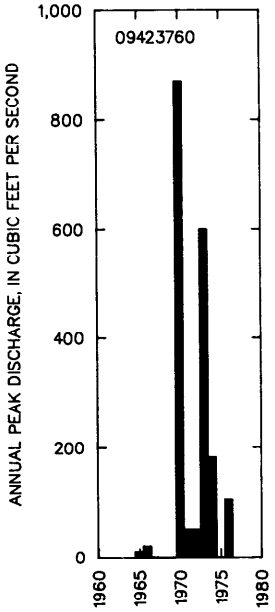
09423760 LITTLE MEADOW CREEK NEAR OATMAN, AZ

LOCATION.--Lat 35°01'50", long 114°18'30", in NE¼SW¼ sec.16, T.19 N., R.19 W., Mohave County, Hydrologic Unit 15030103, at Eds Camp, 4 mi east of Oatman, and 19 mi southwest of Kingman.

DRAINAGE AREA.--8.47 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	04-00-65	10	LT
1966	12-09-65	20	ES
1967	08-06-67	0.5	ES
1968	00-00-68	0	
1969	00-00-69	0	
1970	08-00-70	869	
1971	08-12-71	50	ES
1972	09-00-72	50	ES
1973	11-00-72	600	ES
1974	07-19-74	182	
1975	00-00-75	0	
1976	02-08-76	105	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
28.7	194	508	1,390	2,610	4,590

WEIGHTED SKEW (LOGS)= -0.16
MEAN (LOGS)= 1.43
STANDARD DEV. (LOGS)= 1.01

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
241	3.8	3,400	0.0	1.0	12.0	1.6	3.9

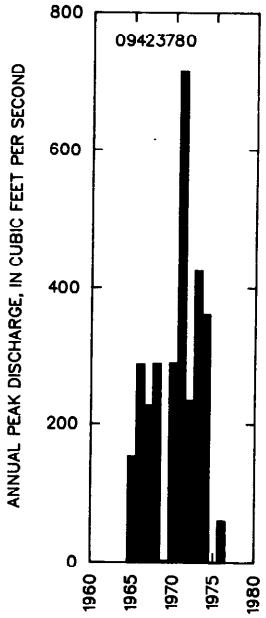
09423780 WALNUT CREEK NEAR KINGMAN, AZ

LOCATION.--Lat 35°02'00", long 114°01'05", in SE¼NW¼ sec.18, T.19 N., R.16 W., Mohave County, Hydrologic Unit 15030103, 11 mi south of Kingman.

DRAINAGE AREA.--31.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	08-00-65	152	
1966	07-20-66	288	
1967	00-00-67	228	
1968	00-00-68	289	
1969	09-13-69	2.0	LT
1970	08-15-70	290	
1971	08-12-71	715	
1972	06-06-72	235	
1973	07-00-73	425	
1974	09-00-74	360	
1975	00-00-75	0	
1976	00-00-76	60	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
247	389	496	644	764	892

WEIGHTED SKEW (LOGS)=	0.08
MEAN (LOGS)=	2.40
STANDARD DEV. (LOGS)=	0.23

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
255	9.3	5,040	50.0	1.0	13.9	1.8	4.0

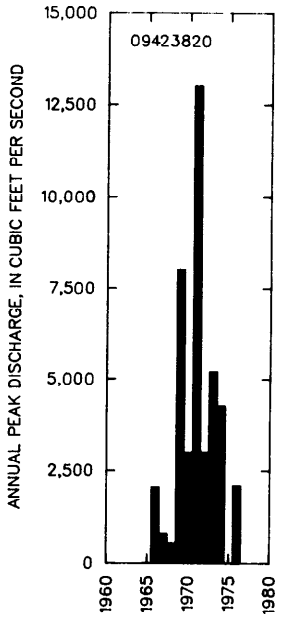
09423820 SACRAMENTO WASH NEAR YUCCA, AZ

LOCATION.--Lat 34°48'40", long 114°09'40", in SE¼SE¼ sec.35, T.17 N., R.18 W., Mohave County, Hydrologic Unit 15030103, at Santa Fe Railroad bridge, 5 mi south of Yucca.

DRAINAGE AREA.--787 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1965	00-00-65	0
1966	12-09-65	2,060
1967	09-00-67	800
1968	07-00-68	520
1969	09-16-69	8,030
1970	00-00-70	3,000
1971	08-12-71	13,000
1972	06-00-72	3,010
1973	11-16-72	5,200
1974	07-19-74	4,260
1975	00-00-75	0
1976	09-25-76	2,100



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
2,640	5,540	8,200	12,500	16,500	21,200

WEIGHTED SKEW (LOGS)= 0.07
MEAN (LOGS)= 3.43
STANDARD DEV. (LOGS)= 0.38

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
45.2	48.4	3,400	6.4	2.5	10.1	1.6	3.7

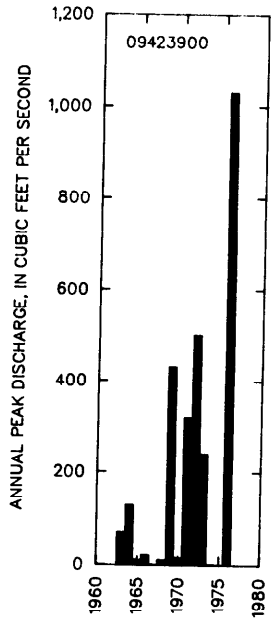
09423900 SACRAMENTO WASH TRIBUTARY NEAR TOPOCK, AZ

LOCATION.--Lat 34°43'47", long 114°18'45", in SW¼NW¼ sec.13, T.16 N., R.20 W., Mohave County, Hydrologic Unit 15030103, at U.S. Highway 66, 9.7 mi east of Topock.

DRAINAGE AREA.--14.7 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	70	
1964	07-26-64	128	
1965	08-10-65	10	ES
1966	12-09-65	20	ES
1967	00-00-67	0	
1968	11-21-67	10	LT
1969	07-17-69	430	
1970	08-00-70	15	ES
1971	08-00-71	320	
1972	00-00-72	500	ES
1973	10-00-72	240	ES
1974	01-00-74	1.0	ES
1975	00-00-75	0	
1976	09-10-76	1,030	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
48.7	291	710	1,780	3,180	5,290

WEIGHTED SKEW (LOGS)= -0.20
MEAN (LOGS)= 1.66
STANDARD DEV. (LOGS)= 0.95

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
98.2	7.6	1,450	0.0	3.0	6.2	1.5	3.6

09424200 WILLOW CREEK (COTTONWOOD WASH NO. 1) NEAR KINGMAN, AZ

LOCATION.--Lat 35°10'52", long 113°28'08", in NW¼ sec.29, T.21 N., R.11 W., Mohave County, Hydrologic Unit 15030201, on right bank, 13 mi upstream from mouth, and 34 mi east of Kingman.

DRAINAGE AREA.--143 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1964	07-31-64	7,000
1965	08-15-65	820
1966	08-18-66	6,700
1967	08-19-67	6,300
1968	10-05-67	3,640
1969	09-13-69	5,580
1970	08-19-70	3,120
1971	08-21-71	4,020
1972	06-07-72	436
1973	06-13-73	1,720
1974	07-21-74	6,450
1975	07-27-75	870
1976	07-24-76	5,250
1977	09-10-77	2,620
1978	03-01-78	3,080

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
67.0	17.6	5,350	90.0	1.0	14.0	1.7	3.6

09424200 WILLOW CREEK (COTTONWOOD WASH 1) NEAR KINGMAN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1965-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	7.8	0.27	1.4	1.9	1.3	2.5
NOVEMBER	2.0	0.65	1.1	0.38	0.35	1.9
DECEMBER	38	0.68	4.3	10	2.3	7.7
JANUARY	6.6	0.61	1.7	1.5	0.86	3.1
FEBRUARY	82	0.91	8.8	22	2.4	15.7
MARCH	88	0.51	10	24	2.3	18.7
APRIL	18	0.15	2.4	4.7	1.9	4.3
MAY	1.3	0.18	0.74	0.33	0.45	1.3
JUNE	4.2	0.10	0.94	1.1	1.2	1.7
JULY	21	0.13	5.1	6.3	1.3	9.0
AUGUST	32	0.21	12	11	0.99	20.7
SEPTEMBER	31	0.20	7.6	11	1.5	13.4
ANNUAL	11	0.86	4.7	3.4	0.72	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.27	0.13	0.09	0.06	0.04	0.03
3	0.29	0.14	0.09	0.07	0.05	0.04
7	0.30	0.14	0.10	0.07	0.05	0.03
14	0.31	0.14	0.09	0.07	0.05	0.03
30	0.34	0.16	0.10	0.07	0.05	0.03
60	0.49	0.25	0.16	0.11	0.07	0.05
90	0.54	0.29	0.20	0.14	0.09	0.07
120	0.81	0.50	0.37	0.28	0.20	0.15
183	1.2	0.82	0.69	0.61	0.54	0.50

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1964-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
3,690	5,860	7,310	9,110	10,400	11,700

WEIGHTED SKEW (LOGS)= -0.40
MEAN (LOGS)= 3.55
STANDARD DEV. (LOGS)= 0.25

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1965-78

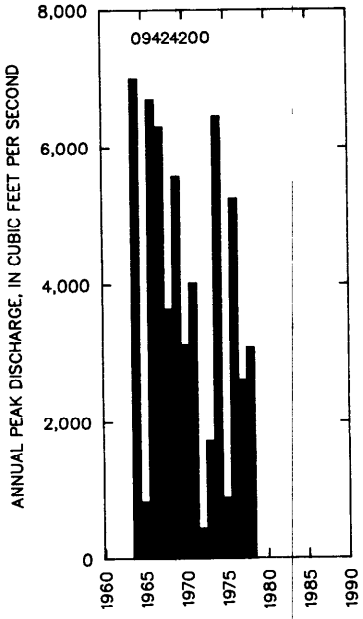
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	298	697	1,060	1,640	2,160	2,740
3	143	322	469	679	848	1,020
7	76	175	254	363	447	532
15	42	93	131	179	213	246
30	24	52	73	99	118	135
60	14	29	41	55	65	75
90	9.3	20	28	38	46	53

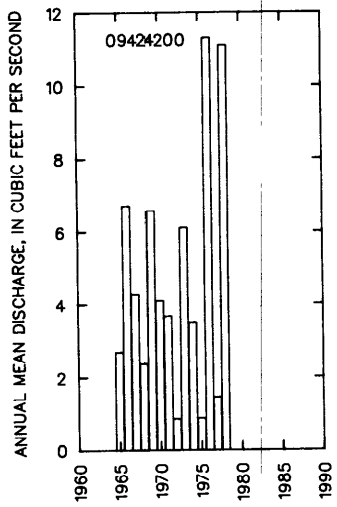
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1965-78

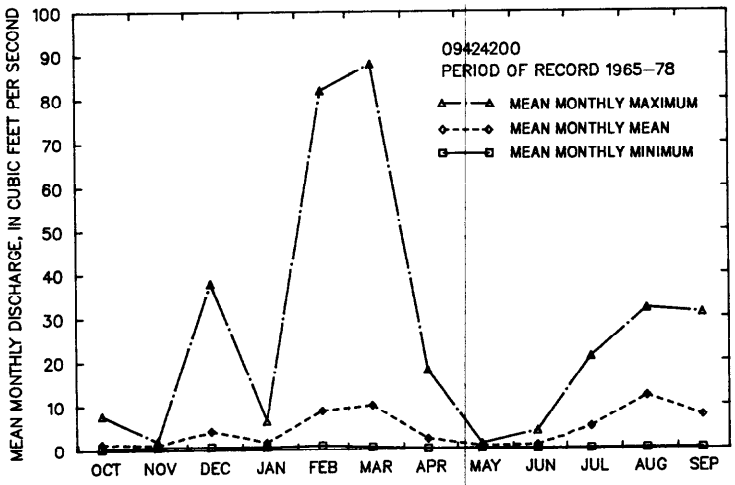
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
86	3.8	1.6	1.5	1.4	1.2	1.1	0.94	0.80	0.66	0.50	0.23	0.18	0.11	0.11	0.10	0.10

† Reliability of values in column is uncertain, and potential errors are large.

09424200 WILLOW CREEK (COTTONWOOD WASH 1) NEAR KINGMAN, AZ--CONTINUED



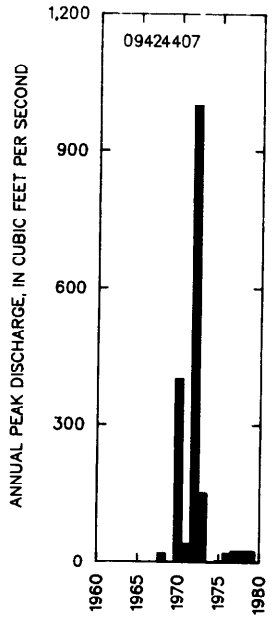




09424407 MCGARRYS WASH NEAR KINGMAN, AZ

LOCATION.--Lat 35°07'00", long 113°39'00", in sec.16, T.20 N., R.13 W., Mohave County, Hydrologic Unit 15030201, on U.S. Highway 93, 1.2 mi north of junction of U.S. Highway 93 and Hackberry Road, and 23 mi southeast of Kingman.

DRAINAGE AREA.--13.5 mi^2



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1968	08-04-68	20	ES
1969	00-00-69	0	
1970	08-00-70	400	ES
1971	07-00-71	40	ES
1972	09-19-72	1,000	
1973	00-00-73	150	
1974	00-00-74	0	
1975	10-29-74	2	ES
1976	00-00-76	20	LT
1977	00-00-77	25	LT
1978	00-00-78	25	LT
1979	00-00-79	25	LT

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
26.9	150	369	963	1,790	3,130

WEIGHTED SKEW (LOGS)= 0.00
MEAN (LOGS)= 1.43
STANDARD DEV. (LOGS)= 0.89

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
203	12.1	4,610	40.0	3.0	12.0	1.5	3.7

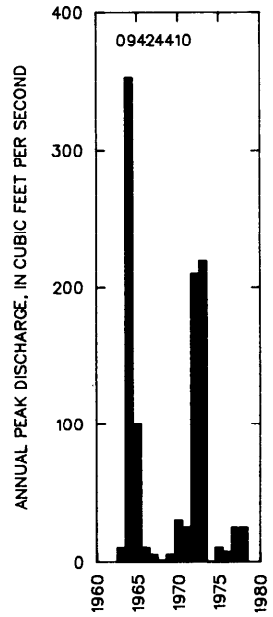
09424410 BIG SANDY RIVER TRIBUTARY NEAR KINGMAN, AZ

LOCATION.--Lat 35°05'30", long 113°39'30", in NE¼ sec.28, T.20 N., R.13 W., Mohave County, Hydrologic Unit 15030201, at U.S. Highway 93, 21 mi southeast of Kingman.

DRAINAGE AREA.--1.99 mi^2

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	10	ES
1964	08-02-64	353	
1965	08-29-65	100	ES
1966	07-30-66	10	ES
1967	12-06-66	5.0	LT
1968	08-04-68	1.0	ES
1969	07-18-69	5.0	ES
1970	08-00-70	30	ES
1971	08-00-71	25	ES
1972	09-19-72	210	
1973	08-00-73	220	
1974	00-00-74	0	
1975	11-02-74	10	ES
1976	02-09-76	7.0	ES
1977	00-00-77	25	LT
1978	03-01-78	25	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
18.6	80.2	173	394	672	1,090

WEIGHTED SKEW (LOGS)=	0.03
MEAN (LOGS)=	1.27
STANDARD DEV. (LOGS)=	0.75

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
214.0	4.3	3,700	60.0	3.0	12.0	1.5	3.7

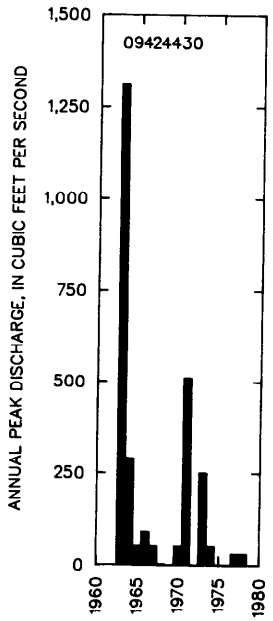
09424430 KAISER SPRING CANYON TRIBUTARY NEAR WIKIEUP, AZ

LOCATION.--Lat 34°34'20", long 113°28'40", in NW¼ sec.12, T.14 N., R.12 W., Mohave County, Hydrologic Unit 15030202, at U.S. Highway 93, 13 mi southeast of Wikieup.

DRAINAGE AREA.--1.7 mi^2

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-22-63	1,310	
1964	08-02-64	290	
1965	00-00-65	50	LT
1966	12-10-65	90	
1967	00-00-67	50	LT
1968	08-04-68	2.0	ES
1969	00-00-69	0	
1970	08-00-70	50	ES
1971	08-19-71	510	
1972	00-00-72	0	
1973	05-31-73	250	ES
1974	09-00-74	50	ES
1975	00-00-75	0	
1976	00-00-76	0	
1977	00-00-77	30	LT
1978	00-00-78	30	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
49.2	196	413	933	1,600	2,610

WEIGHTED SKEW (LOGS)=	0.17
MEAN (LOGS)=	1.71
STANDARD DEV. (LOGS)=	0.70

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
615	1.3	3,520	0.0	1.0	11.2	1.7	3.9

BILL WILLIAMS RIVER BASIN

09424450 BIG SANDY RIVER NEAR WIKIEUP, AZ

LOCATION.--Lat 34°27'45", long 113°37'25", in SE¼ sec.16, T.13 N., R.13 W., Mohave County, Hydrologic Unit 15030201, on left bank 7 mi downstream from Burro Creek, 15 mi upstream from confluence with Santa Maria River, and 17 mi south of Wikieup.

DRAINAGE AREA.--2,742 mi^2, of which 10.1 mi^2 is noncontributing.

REMARKS.--Diversions above station for irrigation of about 3,800 acres, mostly by pumping from ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	08-15-66	1,410
1967	12-07-66	28,000
1968	01-28-68	9,520
1969	01-26-69	11,100
1970	03-01-70	10,000
1971	08-19-71	10,300
1972	08-13-72	1,300
1973	03-13-73	5,310
1974	09-24-74	3,000
1975	07-29-75	1,720
1976	02-09-76	23,700
1977	08-15-77	3,370
1978	03-01-78	36,500
1979	12-18-78	28,400
1980	02-20-80	38,500
1981	09-06-81	437
1982	02-11-82	7,330
1983	03-03-83	25,000
1984	08-18-84	4,950
1985	12-27-84	14,600
1986	11-30-85	7,680
1987	10-10-86	384
1988	08-27-87	5,310
1989	01-06-87	166

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
41.9	58.8	4,490	46.0	1.7	14.2	1.8	4.1

09424450 BIG SANDY RIVER NEAR WIKIEUP, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1967-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	100	2.7	12	24	1.9	1.3
NOVEMBER	252	3.1	28	60	2.1	2.9
DECEMBER	737	2.8	107	208	2.0	11.0
JANUARY	821	4.2	119	209	1.8	12.2
FEBRUARY	2,750	3.9	297	615	2.1	30.6
MARCH	1,940	4.6	304	512	1.7	31.3
APRIL	153	3.6	35	43	1.3	3.6
MAY	36	2.7	9.1	8.2	0.91	0.9
JUNE	14	2.1	5.3	2.8	0.54	0.5
JULY	17	1.9	5.3	3.2	0.61	0.5
AUGUST	178	2.7	28	48	1.7	2.9
SEPTEMBER	226	2.8	21	46	2.2	2.2
ANNUAL	320	4.5	80	91	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	2.7	2.0	1.7	1.5	1.3	1.1
3	2.8	2.1	1.8	1.5	1.3	1.2
7	2.9	2.3	1.9	1.7	1.4	1.3
14	3.1	2.4	2.1	1.8	1.6	1.4
30	3.4	2.6	2.2	1.9	1.6	1.5
60	3.9	3.0	2.6	2.2	1.9	1.7
90	4.2	3.3	2.8	2.5	2.1	1.9
120	4.5	3.5	3.1	2.7	2.4	2.2
183	5.9	4.1	3.6	3.4	3.2	3.2

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
7,710	18,500	28,700	45,200	60,200	77,400

WEIGHTED SKEW (LOGS)= -0.19
MEAN (LOGS)= 3.87
STANDARD DEV. (LOGS)= 0.46

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1967-89

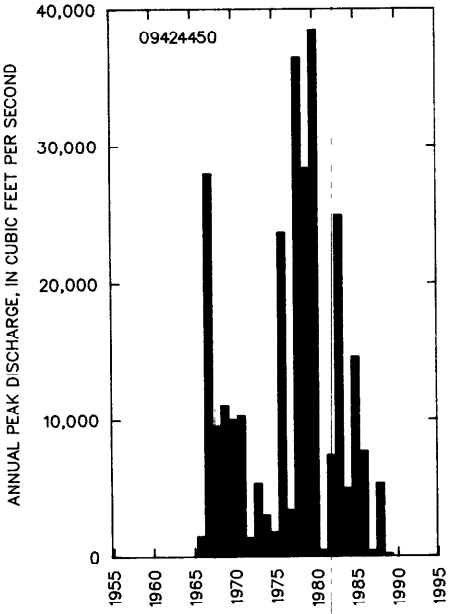
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,950	8,230	16,400	32,400	49,200	70,300
3	1,120	4,800	9,690	19,600	30,200	43,700
7	665	2,860	5,800	11,800	18,300	26,700
15	389	1,640	3,290	6,630	10,200	14,800
30	234	960	1,910	3,820	5,860	8,510
60	149	581	1,130	2,200	3,320	4,750
90	108	414	803	1,580	2,410	3,480

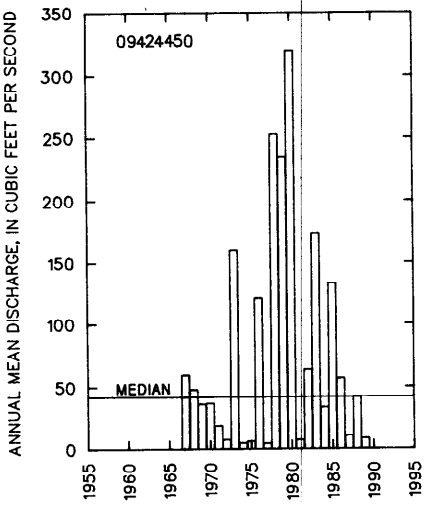
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-89

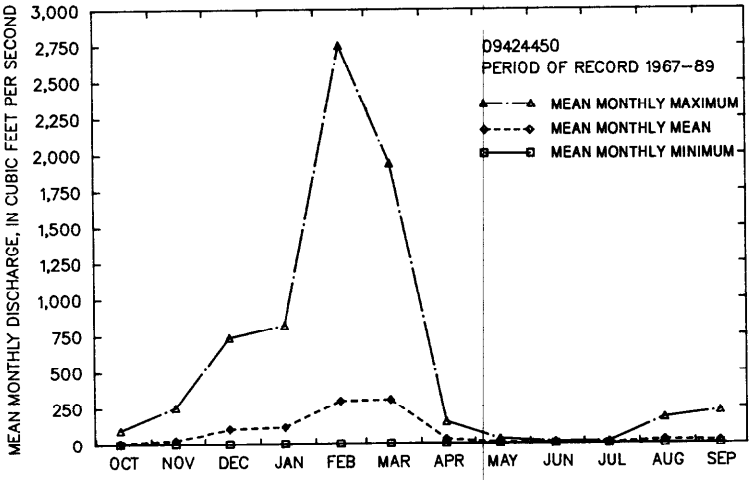
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,580	196	61	30	19	9.5	6.7	5.5	4.9	4.4	3.9	3.2	2.7	2.3	2.0	1.8	1.5

† Reliability of values in column is uncertain, and potential errors are large.

09424450 BIG SANDY RIVER NEAR WIKIEUP, AZ--CONTINUED







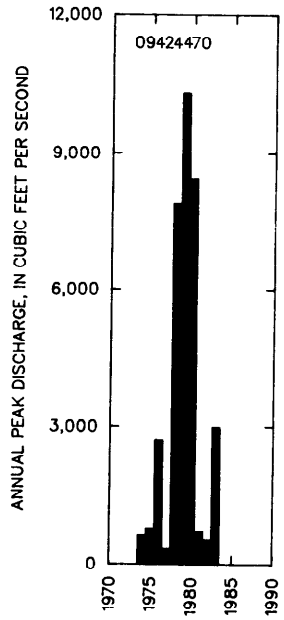
09424470 KIRKLAND CREEK NEAR KIRKLAND, AZ

LOCATION.--Lat 34°23'38", long 112°43'19", in SW¼ sec.7, T.12 N., R.4 W., Yavapai County, Hydrologic Unit 15030203, on right bank 1.3 mi upstream from Skull Valley Wash and 1.7 mi southwest of Kirkland.

DRAINAGE AREA.--109 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1974	08-02-74	615
1975	07-28-75	776
1976	02-09-76	2,710
1977	10-23-76	328
1978	03-01-78	7,890
1979	11-11-78	10,300
1980	02-19-80	8,440
1981	07-11-81	706
1982	03-15-82	520
1983	03-03-83	2,980



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
40.5	23	4,665	72.0	1.0	18.4	1.4	4.4

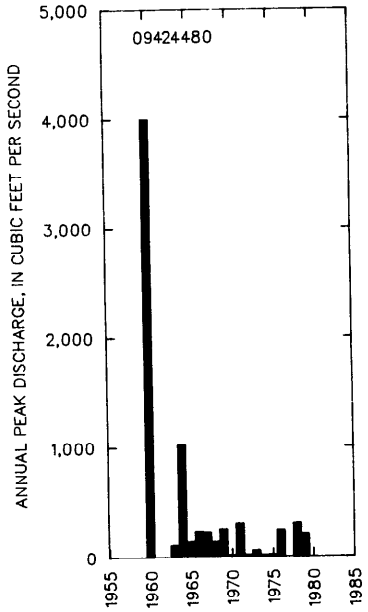
09424480 ASH CREEK NEAR KIRKLAND, AZ

LOCATION.--Lat 34°27'12", long 112°47'45", in NW¼ sec.21, T.13 N., R.5 W., Yavapai County, Hydrologic Unit 15030203, at State Highway 96, 5.5 mi west of Kirkland.

DRAINAGE AREA.--6.95 mi^2

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	00-00-60	4,000	HP
1963	08-20-63	109	
1964	09-13-64	1,020	
1965	09-03-65	140	
1966	12-10-65	230	
1967	07-15-67	225	
1968	08-12-68	140	
1969	08-19-69	250	
1970	08-00-70	15	ES
1971	08-19-71	300	ES
1972	08-13-72	20	
1973	10-07-72	60	ES
1974	00-00-74	15	ES
1975	11-02-74	20	ES
1976	09-25-76	240	
1978	03-01-78	300	
1979	12-18-78	205	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1960, 1963-76, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
133	459	882	1,780	2,810	4,250

WEIGHTED SKEW (LOGS)=	0.05
MEAN (LOGS)=	2.13
STANDARD DEV. (LOGS)=	0.63

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
278.0	5.3	4,680	1.4	1.0	10.4	1.9	4.0

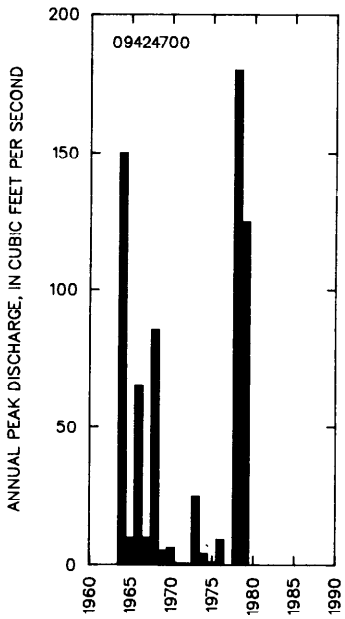
09424700 IRON SPRING WASH TRIBUTARY NEAR BAGDAD, AZ

LOCATION.--Lat 34°31'20", long 113°06'43", in NE¼SE¼ sec.29, T.14 N., R.8 W., Yavapai County, Hydrologic Unit 15030203, at State Highway 96, 6.6 mi southeast of Bagdad.

DRAINAGE AREA.--0.64 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-25-64	150	
1965	04-04-65	10	ES
1966	11-23-65	65	
1967	12-06-66	10	
1968	08-12-68	85	
1969	01-14-69	5.0	ES
1970	08-12-70	6.0	ES
1971	08-00-71	0.6	ES
1972	08-00-72	0.5	
1973	10-00-72	25	ES
1974	08-05-74	4.0	ES
1975	11-02-74	1.0	ES
1976	02-06-76	9.0	
1978	03-01-78	180	
1979	00-00-79	125	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76, 1978-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
12.4	63.5	146	348	607	993

WEIGHTED SKEW (LOGS)= -0.11
MEAN (LOGS)= 1.08
STANDARD DEV. (LOGS)= 0.86

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
431	2.6	3,470	0.0	1.0	12.1	1.9	4.0

09424900 SANTA MARIA RIVER NEAR BAGDAD, AZ

LOCATION.--Lat 34°18'21", long 113°20'47", in SE¼ sec.12, T.11 N., R.11 W., Mohave County, Hydrologic Unit 15030203, on right bank 4.0 mi east of Palmerita Ranch, 12 mi upstream from confluence with Big Sandy River, and 21 mi southwest of Bagdad.

DRAINAGE AREA.--1,128 mi^2.

REMARKS.--Diversions above station for irrigation of about 5,300 acres, most of which is by pumping from ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	12-07-66	13,500	
1968	01-28-68	6,500	
1969	01-26-69	7,200	
1970	03-03-70	1,420	
1971	08-25-71	2,940	
1972	08-13-72	1,350	
1973	10-19-72	11,000	
1974	08-05-74	600	ES
1975	07-29-75	1,890	
1976	02-09-76	11,800	
1977	09-11-77	1,500	
1978	03-01-78	23,100	
1979	12-18-78	17,200	
1980	01-30-80	19,800	
1981	03-06-81	191	
1982	02-11-82	6,750	
1983	09-24-83	15,200	
1984	08-17-84	5,450	
1985	02-10-85	10,400	
1989	02-06-89	394	HP

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
91.9	46.4	4,010	1.0	1.7	14.0	1.9	3.5

09424900 SANTA MARIA RIVER NEAR BAGDAD, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1967-85, 1989

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	505	0.00	33	115	3.5	3.8
NOVEMBER	392	0.00	30	93	3.1	3.6
DECEMBER	461	0.00	108	167	1.5	12.7
JANUARY	936	0.00	119	228	1.9	14.0
FEBRUARY	1,520	0.00	243	376	1.5	28.6
MARCH	1,040	0.00	239	377	1.6	28.1
APRIL	204	0.00	34	55	1.6	4.0
MAY	33	0.00	6.6	10	1.5	0.8
JUNE	16	0.00	1.8	4.6	2.6	0.2
JULY	6.7	0.00	0.57	1.7	3.0	0.1
AUGUST	150	0.00	13	34	2.6	1.6
SEPTEMBER	355	0.00	21	80	3.7	2.5
ANNUAL	232	0.56	70	81	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1968-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1967-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
6,670	13,400	18,600	26,000	31,800	37,900

WEIGHTED SKEW (LOGS)= -0.39
MEAN (LOGS)= 3.80
STANDARD DEV. (LOGS)= 0.38

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1967-85, 1989

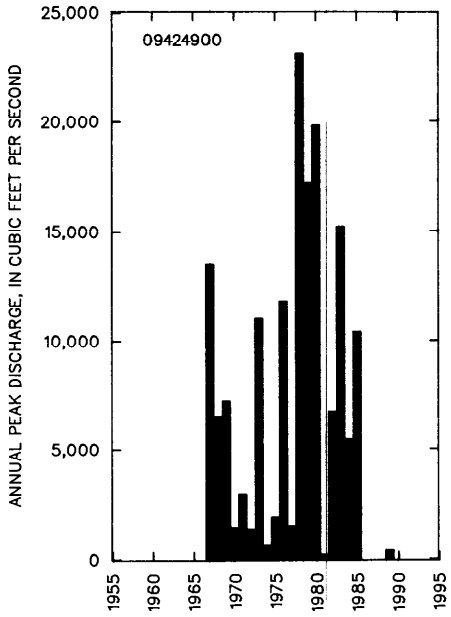
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,520	5,250	9,480	17,000	24,300	33,000
3	871	3,240	6,050	11,200	16,400	22,600
7	516	2,030	3,880	7,360	10,800	15,100
15	290	1,240	2,470	4,890	7,380	10,500
30	170	770	1,570	3,150	4,810	6,890
60	109	527	1,100	2,240	3,440	4,950
90	80	396	827	1,690	2,600	3,730

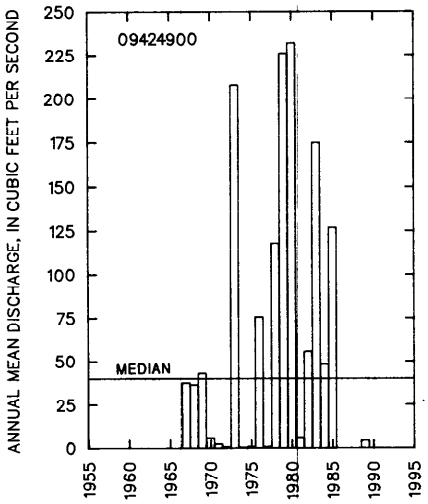
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-85, 1989

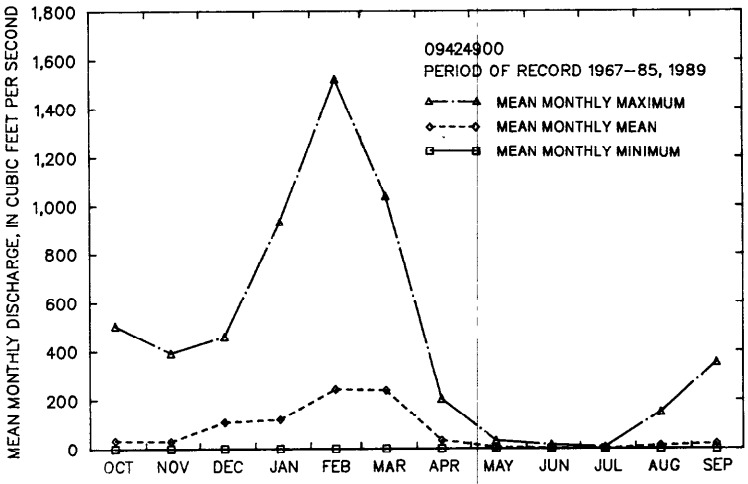
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,780	248	76	32	18	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09424900 SANTA MARIA RIVER NEAR BAGDAD, AZ--CONTINUED







09425500 SANTA MARIA RIVER NEAR ALAMO, AZ

LOCATION.--Lat 34°18′, long 113°31′, in NE¼SW¼ sec.9, T.11 N., R.12 W., Mohave County, Hydrologic Unit 15030204, on right bank 0.5 mi upstream from confluence with Big Sandy River and 5.25 mi upstream from Alamo.

DRAINAGE AREA.--1,439 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1939	09-06-39	22,300	1953	08-28-53	560
1940	09-17-40	262	1954	03-23-54	16,000
1941	03-14-41	20,600	1955	08-18-55	7,180
1942	01-14-42	91	1956	07-24-56	107
1943	08-04-43	544	1957	08-20-57	2,050
1944	02-24-44	6,000	1958	03-22-58	7,870
1945	03-26-45	1,530	1959	08-03-59	2,940
1946	07-24-46	1,170	1960	12-26-59	3,220
1947	09-19-47	1,610	1961	08-30-61	1,720
1948	08-05-48	1,520	1962	09-27-62	3,800
1949	02-25-49	1,100	1963	08-23-63	4,240
1950	10-18-49	1,570	1964	08-02-64	22,500
1951	08-29-51	33,600	1965	04-04-65	4,100
1952	12-31-51	8,020	1966	12-30-65	15,900

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.5	81.7	3,650	0.9	1.7	14.4	1.9	4.0

09425500 SANTA MARIA RIVER NEAR ALAMO, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-65

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	34	0.55	6.4	9.2	1.4	1.7
NOVEMBER	13	0.92	3.9	3.3	0.85	1.0
DECEMBER	228	2.1	20	50	2.5	5.5
JANUARY	160	2.7	20	39	1.9	5.4
FEBRUARY	397	1.9	47	101	2.2	12.6
MARCH	1,070	3.3	129	259	2.0	34.6
APRIL	880	2.6	65	199	3.1	17.6
MAY	34	1.4	4.8	7.1	1.5	1.3
JUNE	38	0.79	3.4	7.3	2.2	0.9
JULY	38	0.60	3.4	7.2	2.1	0.9
AUGUST	624	0.74	50	131	2.7	13.4
SEPTEMBER	257	0.53	19	52	2.8	5.1
ANNUAL	255	2.4	31	52	1.7	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-66

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.71	0.34	0.22	0.15	0.09	0.07
3	0.77	0.38	0.25	0.17	0.11	0.08
7	0.88	0.45	0.30	0.20	0.13	0.09
14	0.95	0.52	0.37	0.26	0.18	0.13
30	1.0	0.68	0.54	0.44	0.35	0.30
60	1.3	0.92	0.76	0.65	0.55	0.48
90	1.5	1.0	0.89	0.78	0.68	0.62
120	1.7	1.2	1.1	0.94	0.83	0.77
183	2.7	1.7	1.5	1.4	1.3	1.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1939-66

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,260	9,870	17,600	32,600	48,600	69,600

WEIGHTED SKEW (LOGS)= 0.00
MEAN (LOGS)= 3.51
STANDARD DEV. (LOGS)= 0.57

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-65

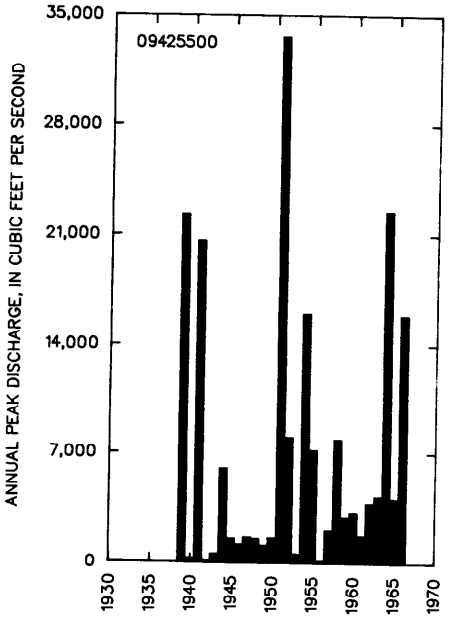
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	633	2,810	5,930	12,800	20,700	31,600
3	359	1,550	3,260	7,040	11,500	17,600
7	200	871	1,860	4,170	6,980	11,100
15	126	537	1,140	2,560	4,300	6,850
30	78	318	672	1,500	2,530	4,060
60	48	186	386	855	1,440	2,320
90	36	133	271	591	991	1,590

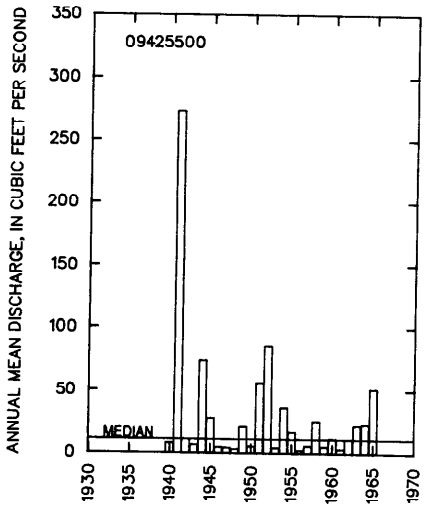
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-65

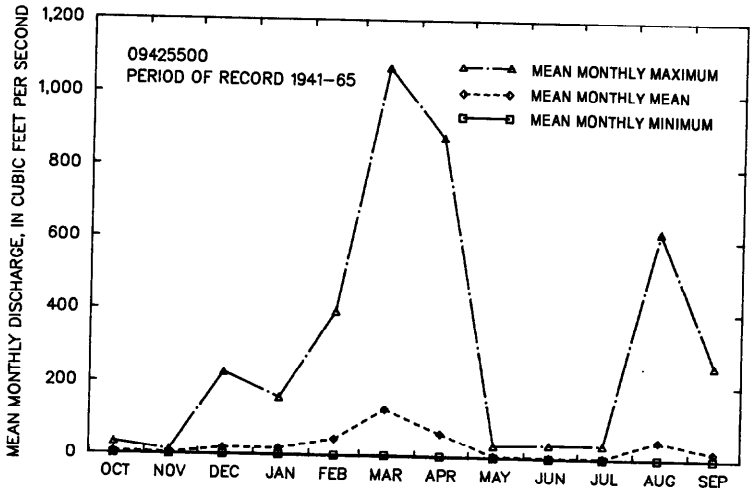
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
662	49	13	7.9	6.0	4.6	3.7	2.9	2.3	2.0	1.6	1.1	0.84	0.56	0.46	0.41	0.21

† Reliability of values in column is uncertain, and potential errors are large.

09425500 SANTA MARIA RIVER NEAR ALAMO, AZ--CONTINUED







BILL WILLIAMS RIVER BASIN

09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ

LOCATION.--Lat 34°13'51", long 113°36'29", in SE¼SE¼ sec.4, T.10 N., R.13 W., La Paz County, Hydrologic Unit 15030204, on left bank 0.6 mi downstream from Alamo Dam, 3.7 mi downstream from Bullard Wash, and 8 mi downstream from confluence of Santa Maria and Big Sandy Rivers.

DRAINAGE AREA.--4,633 mi^2, of which 10.1 mi^2 is noncontributing and 400 mi^2 is below confluence of Santa Maria and Big Sandy Rivers.

REMARKS.--Diversions above station for irrigation of about 9,100 acres, mostly by pumping from ground water. Flow regulated by Alamo Lake, beginning Mar. 2, 1969. Temporary storage and slight regulation of releases through uncontrolled rectangular conduit through Alamo Dam June 23, 1968, to Mar. 27, 1969. Alamo Lake is formed by an earthfill and rockfill dam, completed in 1968. Total capacity of lake is 1,043,000 acre-ft. See table below for monthend contents.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1891	02-21-91	[1]200,000	HP	1958	03-22-58	13,000	
1916	01-19-16	175,000	ES,HP	1959	08-18-59	2,900	
1927	02-16-27	125,000	ES,HP	1960	12-26-59	3,420	
1929	09-04-29	35,000	ES	1961	09-13-61	1,630	
1930	09-08-30	90,000	ES	1962	02-13-62	8,400	
1931	08-05-31	100,000	ES	1963	08-22-63	10,300	
1932	02-09-32	60,000	ES	1964	08-02-64	25,600	
1933	03-04-33	150	ES	1965	04-10-65	12,300	
1934	08-29-34	2,000	ES	1966	12-10-65	41,900	
1935	02-07-35	20,000	ES	1967	12-07-66	38,900	
1936	08-09-36	4,000	ES	1968	01-28-68	16,000	ES
1937	02-07-37	105,000		1969	01-26-69	4,950	KR
1938	03-04-38	70,000	ES	1970	03-03-70	2,240	KR
1939	09-06-39	86,000		1971	08-30-71	732	KR
1940	02-03-40	2,700		1972	12-29-71	108	MD,KR
1941	03-14-41	46,000		1973	03-16-73	2,150	MD,KR
1942	01-14-42	407		1974	03-11-74	13	MD,KR
1943	03-05-43	2,480		1975	04-04-75	27	MD,KR
1944	02-24-44	11,000		1976	02-19-76	418	MD,KR
1945	03-16-45	7,380		1977	12-08-76	60	MD,KR
1946	07-25-46	972		1978	03-04-78	286	MD,KR
1947	12-28-46	7,230		1979	09-30-79	652	MD,KR
1948	08-05-48	2,070		1980	03-22-80	3,400	MD,KR
1949	02-25-49	2,900		1981	10-11-80	1,100	MD,KR
1950	09-06-50	1,850		1982	03-12-82	25	KR
1951	08-29-51	65,100		1983	03-30-83	1,930	MD,KR
1952	12-31-51	37,600		1984	03-14-84	2,000	MD,KR
1953	08-28-53	193		1985	03-21-85	2,000	MD,KR
1954	03-23-54	34,700		1986	10-15-85	379	MD,KR
1955	08-23-55	4,610		1987	10-01-86	300	MD,KR
1956	07-24-56	162		1988	09-03-88	328	MD,KR
1957	08-20-57	12,100		1989	10-04-88	54	MD,KR

[1]Highest since 1861.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
42.6	125	4,120	28.0	1.7	13.7	1.8	3.9

09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1970-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	456	0.00	99	154	1.5	6.1
NOVEMBER	505	0.00	72	131	1.8	4.4
DECEMBER	606	1.3	76	152	2.0	4.7
JANUARY	354	1.5	49	89	1.8	3.0
FEBRUARY	970	2.7	157	251	1.6	9.6
MARCH	3,080	5.0	516	811	1.6	31.7
APRIL	562	2.1	110	158	1.4	6.7
MAY	719	0.00	86	184	2.1	5.3
JUNE	494	0.00	64	128	2.0	3.9
JULY	1,420	0.00	131	324	2.5	8.0
AUGUST	912	0.63	129	227	1.8	7.9
SEPTEMBER	1,110	0.05	142	258	1.8	8.7
ANNUAL	888	2.1	136	203	1.5	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1971-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	1.0
3	0.00	0.00	0.00	0.00	0.00	1.1
7	0.00	0.00	0.00	0.00	0.00	1.6
14	0.00	0.00	0.00	0.00	0.00	2.0
30	0.00	0.00	0.00	0.00	0.00	3.1
60	0.00	0.00	0.00	0.00	0.00	4.4
90	0.00	0.00	0.00	0.06	0.40	5.2
120	6.6	1.1	0.43	0.19	0.08	0.04
183	16	3.5	1.5	0.76	0.33	0.19

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
----	----	----	----	----	----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1970-89

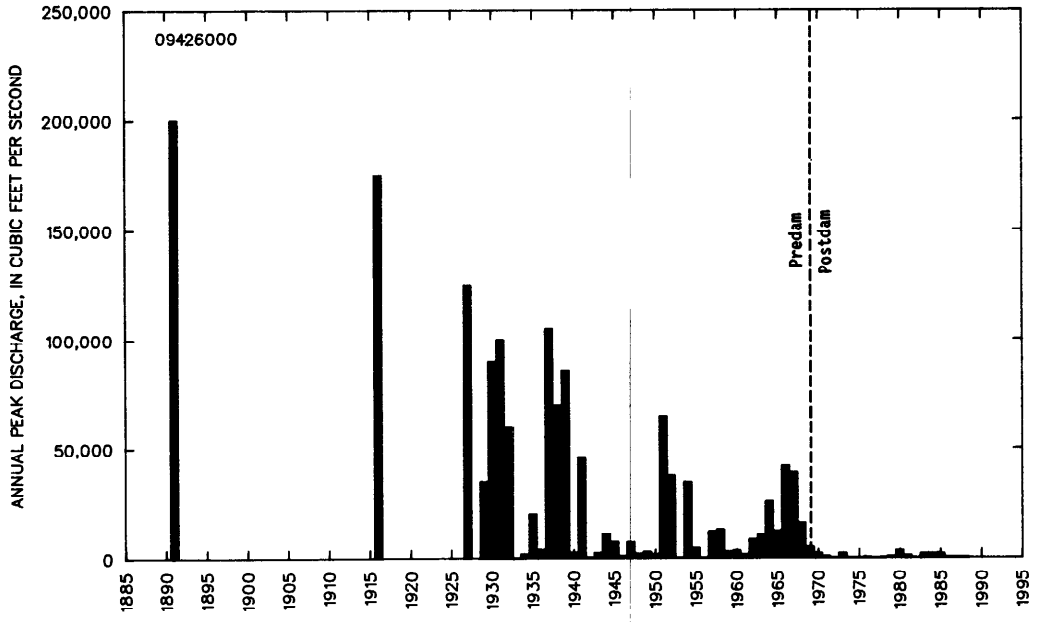
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	401	1,490	2,740	4,970	7,080	9,550
3	385	1,460	2,700	4,930	7,060	9,560
7	343	1,350	2,550	4,770	6,940	9,540
15	278	1,190	2,370	4,710	7,160	10,300
30	210	921	1,880	3,870	6,030	8,850
60	151	618	1,220	2,400	3,630	5,200
90	121	473	913	1,770	2,660	3,780

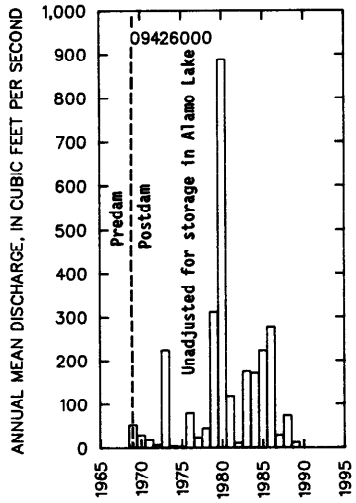
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-89

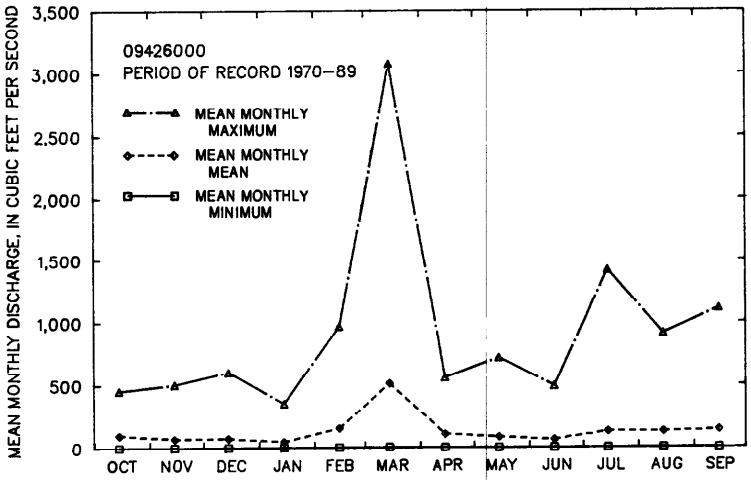
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,000	667	424	289	143	40	15	13	11	8.3	4.4	0.51	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ--CONTINUED







09426500 BILL WILLIAM RIVER AT PLANET, AZ

LOCATION.--Lat 34°15'23", long 113°58'41", in NE¼ sec.36, T.11 N., R.17 W., Yuma County, Hydrologic Unit 15030204, 1 mi west of Planet and 6 mi upstream from water line of Havasu Lake at elevation 450 ft above mean sea level.

DRAINAGE AREA.--5,054 mi^2, of which 10.1 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1891	02-21-91	200,000	HP
1916	01-19-16	175,000	HP
1927	02-16-27	125,000	HP
1929	09-04-29	25,000	
1930	09-08-30	64,000	
1931	08-05-31	80,000	
1932	02-09-32	51,000	
1933	03-04-33	107	
1934	08-29-34	1,470	
1935	02-07-35	15,900	
1936	08-09-36	2,900	
1937	02-07-37	92,500	
1938	03-04-38	61,000	
1939	09-07-39	73,000	
1940	02-03-40	2,600	
1941	03-02-41	42,600	
1942	01-15-42	300	
1943	03-05-43	1,580	
1944	02-24-44	10,800	
1945	03-16-45	4,520	
1946	07-22-46	328	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
38.6	152	3,900	26.0	1.7	13.2	1.8	3.9

09426500 BILL WILLIAMS RIVER AT PLANET, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1915, 1929-46

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	46	9.2	21	8.5	0.40	1.1
NOVEMBER	26	10	19	3.8	0.20	1.0
DECEMBER	659	13	68	150	2.2	3.7
JANUARY	445	13	78	125	1.6	4.2
FEBRUARY	4,680	13	687	1,320	1.9	36.9
MARCH	2,780	13	425	730	1.7	22.9
APRIL	1,830	12	121	414	3.4	6.5
MAY	122	11	28	29	1.0	1.5
JUNE	95	11	21	18	0.86	1.1
JULY	80	9.5	22	15	0.70	1.2
AUGUST	1,180	14	93	264	2.8	5.0
SEPTEMBER	3,660	13	276	832	3.0	14.8
ANNUAL	603	16	152	164	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-46

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	12	10	9.3	8.6	7.8	7.3
3	13	10	9.4	8.7	7.9	7.4
7	14	11	10	9.3	8.2	7.5
14	14	12	11	9.6	8.6	7.9
30	15	13	11	10	8.9	8.1
60	16	13	12	11	9.3	8.4
90	17	14	12	11	9.7	8.9
120	17	14	13	12	12	11
183	23	15	13	12	12	11

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1915, 1929-46

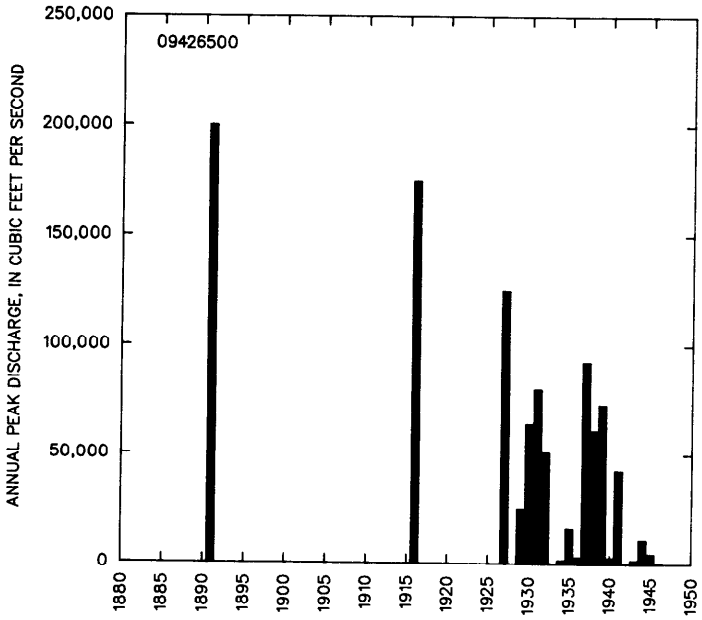
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	4,220	19,600	39,200	75,900	112,000	154,000
3	2,560	11,200	22,000	42,100	61,800	85,200
7	1,440	5,730	10,800	19,700	28,100	37,900
15	937	3,680	6,920	12,700	18,300	24,800
30	584	2,220	4,160	7,700	11,200	15,300
60	333	1,200	2,240	4,210	6,200	8,690
90	237	813	1,500	2,810	4,160	5,870

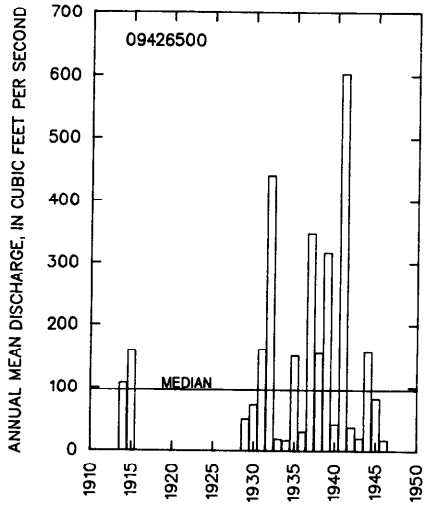
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1915, 1929-46

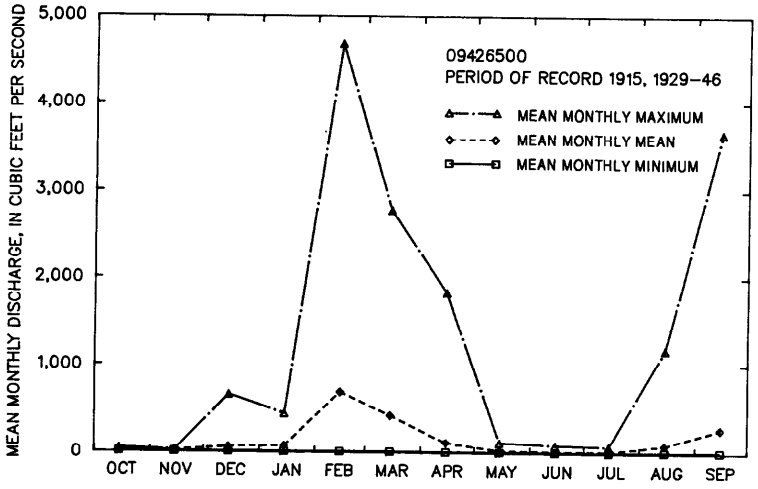
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,030	275	82	39	28	23	21	20	18	17	15	13	12	10	10	9.0	8.2

† Reliability of values in column is uncertain, and potential errors are large.

09426500 BILL WILLIAMS RIVER AT PLANET, AZ--CONTINUED







TRIBUTARIES BETWEEN PARKER DAM AND GILA RIVER

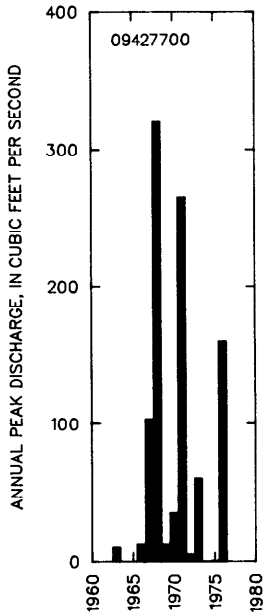
09427700 MONKEYS HEAD WASH NEAR PARKER, AZ

LOCATION.--Lat 34°16'40", long 114°07'46", in SW¼SW¼ sec.22, T.11 N., R.18 W., Yuma County, Hydrologic Unit 15030104, at State Highway 172, 1.5 miles south of Parker Dam, and 13 miles northeast of Parker.

DRAINAGE AREA.--1.84 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-16-63	10	ES
1964	00-00-64	0	
1965	00-00-65	0	
1966	12-09-65	12	
1967	09-00-67	103	
1968	08-13-68	320	
1969	10-03-68	12	ES
1970	03-01-70	35	
1971	00-00-71	265	
1972	09-18-72	5.0	ES
1973	11-16-72	60	
1974	00-00-74	0	
1975	08-00-75	0.5	LT
1976	09-25-76	160	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
18.2	100	236	572	1,000	1,640

WEIGHTED SKEW (LOGS)= -0.18
MEAN (LOGS)= 1.23
STANDARD DEV. (LOGS)= 0.91

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
415	2.7	1,130	0.0	3.0	5.5	1.4	3.4

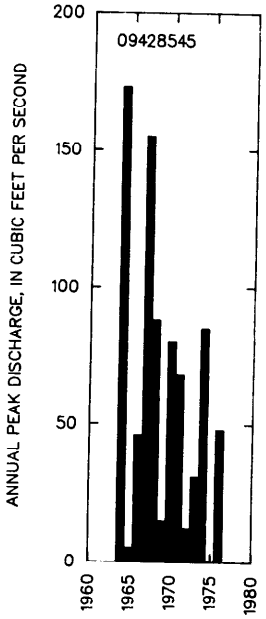
09428545 CUNNINGHAM WASH TRIBUTARY NEAR WENDEN, AZ

LOCATION.--Lat 34°00'35", long 113°34'40", in SE¼NE¼ sec.26, T.8 N., R.13 W., Yuma County, Hydrologic Unit 15030105, Alamo Dam access road, 13 miles north of Wenden.

DRAINAGE AREA.--0.77 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-02-64	173	
1965	04-04-65	5.0	ES
1966	08-18-66	46	
1967	08-20-67	155	
1968	08-06-68	88	
1969	08-00-69	15	
1970	08-10-70	80	ES
1971	00-00-71	68	
1972	09-17-72	12	
1973	10-06-72	31	
1974	07-20-74	85	
1975	07-25-75	0.4	ES
1976	09-25-76	48	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
52.1	101	140	198	245	296

WEIGHTED SKEW (LOGS)= -0.19
MEAN (LOGS)= 1.71
STANDARD DEV. (LOGS)= 0.35

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
365	1.8	2,330	0.0	3.0	8.1	1.6	3.8

TRIBUTARIES BETWEEN PARKER DAM AND GILA RIVER

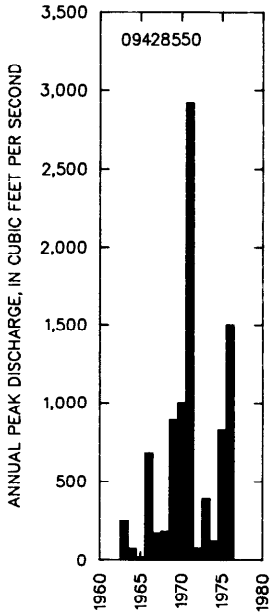
09428550 BOUSE WASH TRIBUTARY NEAR BOUSE, AZ

LOCATION.--Lat 33°54'05", long 113°58'25", in SW¼SW¼ sec.31, T.7 N., R.16 W., Yuma County, Hydrologic Unit 15030105, at State Highway 72, 3 miles southeast of Bouse.

DRAINAGE AREA.--14.6 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-17-63	248	
1964	10-18-63	75	
1965	04-03-65	20	ES
1966	09-20-66	678	
1967	10-04-66	170	
1968	08-03-68	180	
1969	08-08-69	890	
1970	08-02-70	1,000	ES
1971	08-10-71	2,920	
1972	09-17-72	76	
1973	08-16-73	390	
1974	08-03-74	120	
1975	07-29-75	828	
1976	09-25-76	1,500	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
344	998	1,730	3,070	4,440	6,170

WEIGHTED SKEW (LOGS)= -0.08
MEAN (LOGS)= 2.53
STANDARD DEV. (LOGS)= 0.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
50	8.3	1,230	0.0	3.0	6.5	1.5	3.7

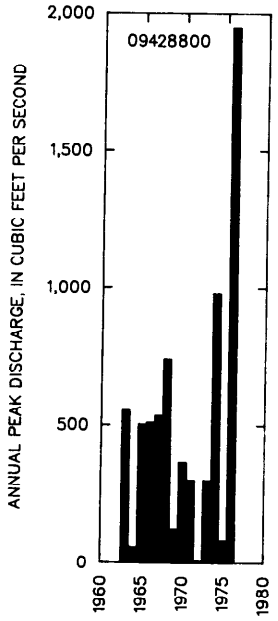
09428800 TYSON WASH TRIBUTARY NEAR QUARTZSITE, AZ

LOCATION.--Lat 33°30'45", long 114°13'00", in SW¼ SEC. 15, T.2 N., R.19 W., Yuma County, Hydrologic Unit 15030106, at U.S. Highway 95, 10.7 miles south of Quartzsite.

DRAINAGE AREA.--13.7 mi^2, contributing drainage area not determined.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-17-63	554	
1964	08-01-64	55	
1965	08-19-65	503	
1966	09-13-66	510	
1967	10-04-66	535	
1968	07-05-68	740	
1969	09-13-69	120	
1970	08-00-70	365	
1971	08-19-71	300	
1972	08-08-72	5.0	ES
1973	08-04-73	300	
1974	08-03-74	980	
1975	09-07-75	80	
1976	09-25-76	1,950	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

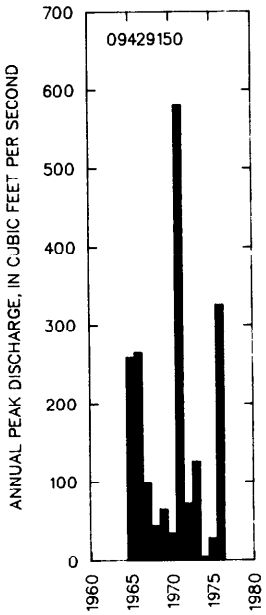
MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
75	8.0	1,520	0.0	3.0	6.0	1.5	3.7

TRIBUTARIES BETWEEN PARKER DAM AND GILA RIVER

09429150 CREOSOTE WASH NEAR EHRENBERG, AZ

LOCATION.--Lat 33°37'15", long 114°29'41", in NE¼ sec.2, T.3 N., R.22 W., Yuma County, Hydrologic Unit 15030104, at Parker Valley Road, 2.5 miles northeast of Ehrenberg, and 6 miles northeast of Blythe, California.

DRAINAGE AREA.--1.98 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	08-16-65	259	
1966	12-09-65	265	
1967	08-14-67	98	
1968	07-06-68	43	
1969	07-17-69	65	
1970	02-28-70	34	
1971	08-10-71	580	
1972	08-08-72	72	
1973	08-16-73	125	
1974	08-00-74	5.0	LT
1975	09-16-75	28	
1976	09-25-76	325	

MAGNITUDE AND PROBABILITY OF INSTANTANE OUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECU RRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY , IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
95.6	239	390	660	932	1,270

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 1.99
STANDARD DEV. (LOGS)= 0.47

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
95.2	4.2	509.0	0.0	3.0	5.5	1.2	3.3

TRIBUTARIES BETWEEN PARKER DAM AND GILA RIVER

09429400 INDIAN WASH TRIBUTARY NEAR YUMA, AZ

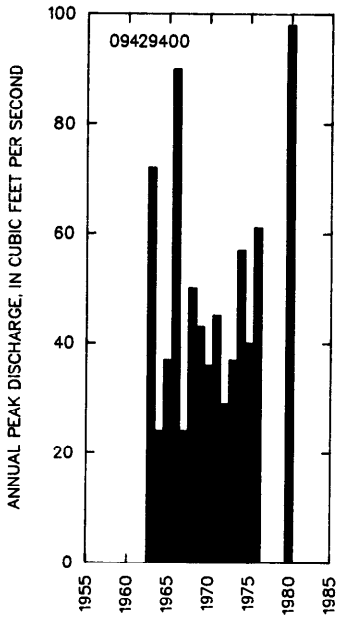
LOCATION.--Lat 33°06'33", long 114°17'41", in NW¼ sec.2, T.4 S., R.20 W. (unsurveyed), Yuma County, Hydrologic Unit 15030104, at U.S. Highway 95, 33 miles northeast of Dome.

DRAINAGE AREA.--2.56 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-17-63	72	
1964	10-18-63	24	
1965	04-03-65	37	
1966	09-13-66	90	
1967	10-03-66	24	
1968	11-00-67	50	
1969	09-06-69	43	
1970	03-01-70	36	
1971	09-29-71	45	
1972	08-00-72	29	
1973	10-06-72	37	
1974	07-21-74	57	
1975	00-00-75	40	
1976	09-25-76	61	
1980	00-00-80	[1]98	HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
44.7	64.8	79.3	99	115	131

WEIGHTED SKEW (LOGS)= 0.19
MEAN (LOGS)= 1.66
STANDARD DEV. (LOGS)= 0.19

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
66.7	5.0	1,190	0.0	3.0	5.5	1.5	3.7

TRIBUTARIES BETWEEN PARKER DAM AND GILA RIVER

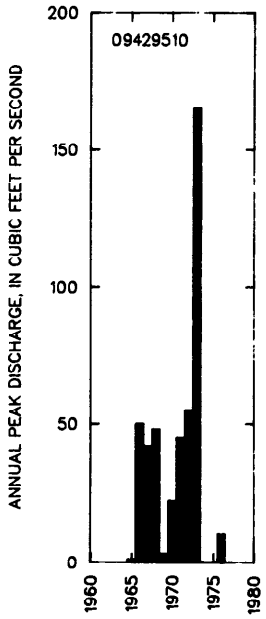
09429510 MITTRY LAKE TRIBUTARY NEAR YUMA, AZ

LOCATION.--Lat 32°51'35", long 114°26'05", in SW¼SE¼ sec.32, T.6 S., R.21 W., Yuma County, Hydrologic Unit 15030107, at Yuma Test Station, 14.5 miles northeast of Yuma.

DRAINAGE AREA.--0.30 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	04-03-65	1.0	LT
1966	12-09-65	50	
1967	09-02-67	42	
1968	02-12-68	48	
1969	01-14-69	3.0	ES
1970	03-01-70	22	
1971	09-29-71	45	
1972	06-06-72	55	
1973	08-16-73	165	
1974	00-00-74	0	
1975	00-00-75	0	
1976	09-24-76	10	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD RECORD 1965-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
22	62.8	106	182	256	346

WEIGHTED SKEW (LOGS)=	-0.19
MEAN (LOGS)=	1.33
STANDARD DEV. (LOGS)=	0.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
122	0.98	346.0	0.0	3.0	4.2	1.3	3.6

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

LOCATION.--Lat 32°38'53", long 108°50'43", in SE¼SW¼ sec.18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on left bank at head of canyon, 1.4 mi downstream from Blue Creek, 10 mi east of Virden, and 16 mi upstream from New Mexico-Arizona State line.

DRAINAGE AREA.--3,203 mi^2, excluding Animas River basin.

REMARKS.-Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1927	07-04-27	1,800	1959	08-13-59	16,400
1928	07-26-28	1,630	1960	01-12-60	5,220
1929	07-30-29	5,700	1961	08-15-61	1,920
1930	08-11-30	7,400	1962	09-26-62	3,920
1931	08-03-31	8,000	1963	08-31-63	7,320
1932	07-30-32	6,800	1964	07-25-64	4,480
1933	09-08-33	5,650	1965	07-24-65	2,540
1934	08-26-34	8,920	1966	12-23-65	10,900
1935	09-27-35	8,600	1967	08-12-67	11,500
1936	06-11-36	3,600	1968	02-15-68	2,920
1937	02-17-37	9,070	1969	09-02-69	1,790
1938	08-31-38	6,400	1970	09-19-70	1,130
1939	09-16-39	1,630	1971	09-18-71	3,730
1940	09-06-40	11,000	1972	10-26-71	5,700
1941	09-29-41	[1]41,700	1973	10-20-72	27,200
1942	09-13-42	3,140	1974	08-04-74	7,560
1943	09-27-43	1,600	1975	09-08-75	7,720
1944	08-19-44	4,010	1976	09-15-76	3,700
1945	08-11-45	5,370	1977	08-13-77	4,450
1946	10-08-45	10,600	1978	03-03-78	7,800
1947	08-22-47	3,400	1979	12-19-78	58,700
1948	08-12-48	2,240	1980	09-10-80	4,300
1949	01-14-49	15,600	1981	08-18-81	1,890
1950	09-24-50	2,190	1982	10-02-81	3,680
1951	08-28-51	440	1983	02-04-83	5,870
1952	01-19-52	6,100	1984	10-02-83	15,500
1953	08-21-53	3,330	1985	12-28-84	37,000
1954	08-21-54	6,670	1986	10-11-85	6,670
1955	07-28-55	5,280	1987	08-11-87	2,680
1956	08-13-56	2,660	1988	09-22-88	9,000
1957	08-05-57	6,710	1989	07-30-89	696
1958	03-23-58	4,550			

[1]Highest since 1891.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
35.8	115	6,690	54.0	3.0	16.2	1.6	3.3

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM--CONTINUED

MEAN MONTHLY AND ANNUAL DISCHARGES 1928-78, 1981-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,670	5.4	170	295	1.7	7.4
NOVEMBER	520	35	107	72	0.67	4.7
DECEMBER	1,800	48	186	276	1.5	8.1
JANUARY	1,390	64	209	256	1.2	9.1
FEBRUARY	1,280	61	293	315	1.1	12.8
MARCH	1,460	45	387	418	1.1	16.9
APRIL	1,140	28	255	257	1.0	11.1
MAY	907	14	141	163	1.2	6.2
JUNE	183	4.4	45	42	0.93	2.0
JULY	366	4.9	81	64	0.78	3.5
AUGUST	1,160	9.4	221	225	1.0	9.7
SEPTEMBER	1,510	4.9	194	283	1.5	8.5
ANNUAL	640	43	190	136	0.71	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1929-78, 1981-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	6.5	3.1	2.2	1.7	1.2	1.0
3	6.9	3.4	2.4	1.8	1.3	1.1
7	7.9	3.8	2.7	2.0	1.5	1.2
14	10	4.7	3.2	2.3	1.5	1.2
30	17	7.4	4.7	3.3	2.1	1.6
60	32	16	11	7.4	4.8	3.5
90	45	24	17	12	8.4	6.4
120	61	34	24	17	11	8.3
183	91	54	40	30	22	17

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1927-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,980	10,400	15,200	22,900	29,900	37,900

WEIGHTED SKEW (LOGS)= 0.00
MEAN (LOGS)= 3.70
STANDARD DEV. (LOGS)= 0.38

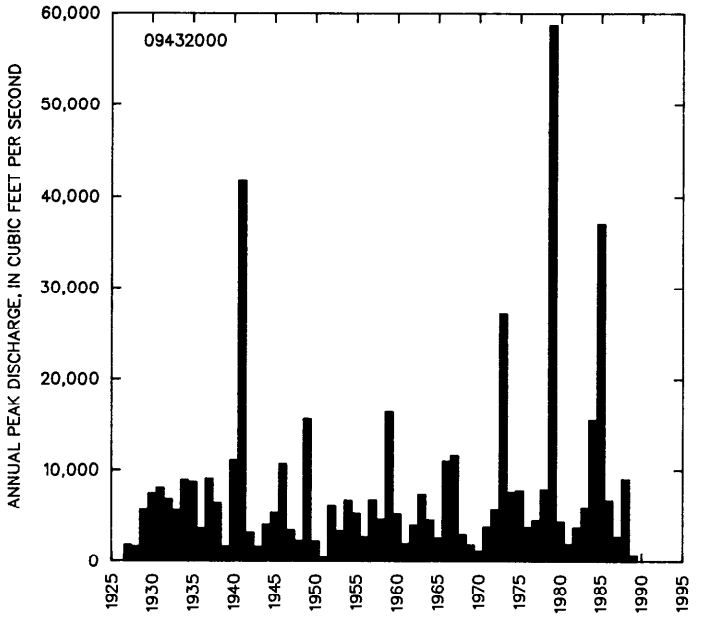
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1928-78, 1981-89

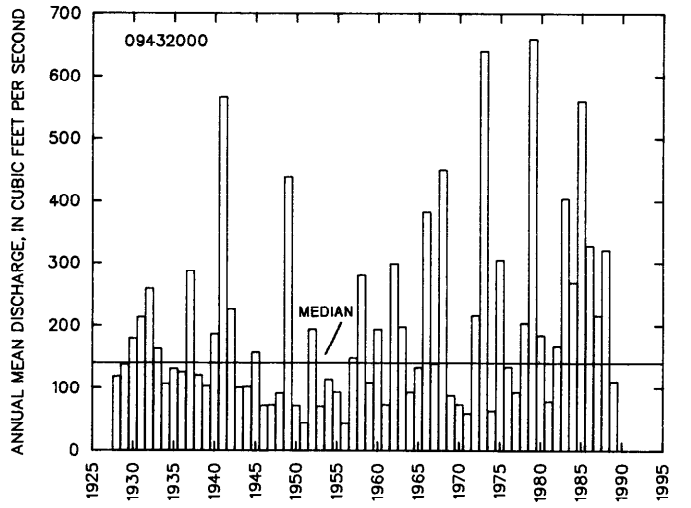
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,910	4,830	8,000	13,900	20,000	27,900
3	1,370	3,300	5,300	8,890	12,500	17,000
7	965	2,130	3,230	5,080	6,810	8,890
15	704	1,440	2,100	3,110	4,010	5,040
30	523	1,010	1,410	2,000	2,500	3,050
60	364	706	1,000	1,460	1,870	2,340
90	295	580	840	1,260	1,650	2,120

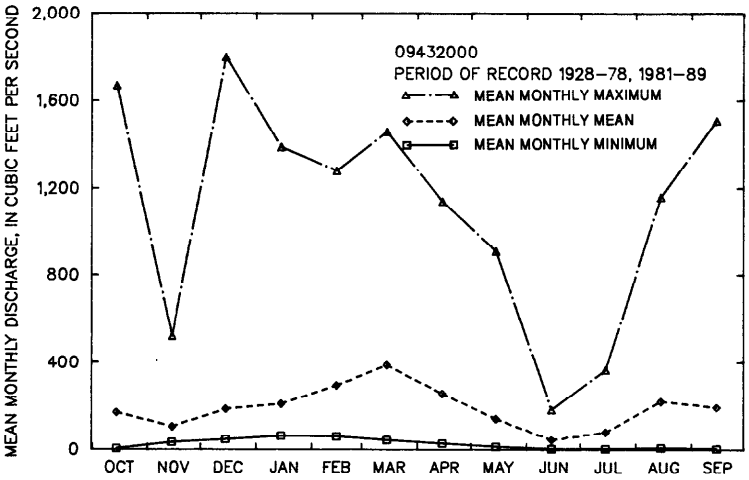
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928-78, 1981-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,760	684	404	284	214	146	110	91	77	61	43	21	9.5	4.4	3.3	2.8	2.0

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM--CONTINUED







09442000 GILA RIVER NEAR CLIFTON, AZ

LOCATION.--Lat 32°57'57", long 109°18'35", in NE¼SE¼ sec.25, T.5 S., R.29 E., Greenlee County, Hydrologic Unit 15040002, on right bank 60 ft upstream from bridge on county road, 6 mi upstream from San Francisco River, and 6 mi south of Clifton.

DRAINAGE AREA.--4,010 mi^2.

REMARKS.--Diversions for irrigation of about 14,300 acres above station. Station is below all Duncan Valley diversions.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1911	07-25-11	16,000	1956	10-04-55	12,700
1912	03-11-12	21,000	1957	08-29-57	8,070
1913	09-22-13	1,200	1958	03-24-58	3,980
1914	08-06-14	5,700	1959	08-26-59	5,610
1915	12-20-14	12,000	1960	01-13-60	4,000
1916	01-18-16	7,600	1961	08-13-61	2,400
1917	10-15-16	19,500	1962	09-26-62	8,980
1928	07-31-28	2,870	1963	08-31-63	3,580
1929	07-30-29	13,200	1964	07-15-64	5,070
1930	08-11-30	6,300	1965	09-03-65	3,310
1931	09-04-31	6,900	1966	12-24-65	10,700
1932	07-09-32	4,500	1967	08-12-67	11,100
1933	09-09-33	4,000	1968	03-11-68	4,380
1934	08-26-34	17,000	1969	09-11-69	3,610
1935	08-31-35	3,100	1970	08-05-70	4,220
1936	08-28-36	4,300	1971	10-02-70	5,010
1937	02-18-37	7,450	1972	09-03-72	6,160
1938	08-06-38	5,930	1973	10-21-72	[1]33,000
1939	08-05-39	8,670	1974	07-19-74	3,460
1940	10-08-39	6,300	1975	09-08-75	4,660
1941	09-29-41	28,200	1976	02-11-76	2,390
1942	08-06-42	3,280	1977	08-13-77	2,820
1943	09-27-43	6,770	1978	03-04-78	8,420
1944	08-19-44	2,610	1979	12-19-78	57,000
1945	08-08-45	4,540	1980	09-10-80	8,500
1946	10-09-45	5,800	1981	07-12-81	8,190
1948	08-03-48	1,090	1982	10-02-81	4,520
1949	01-15-49	13,900	1983	02-04-83	4,980
1950	07-30-50	1,680	1984	10-02-83	15,300
1951	08-03-51	4,600	1985	12-29-84	48,800
1952	01-20-52	4,280	1986	10-18-85	6,270
1953	07-30-53	3,700	1987	07-21-87	3,020
1954	08-23-54	6,000	1988	09-22-88	6,710
1955	07-23-55	9,450	1989	07-31-89	620

[1]Highest since 1891.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
29.0	158	6,250	44.0	2.9	15.4	1.6	3.4

09442000 GILA RIVER NEAR CLIFTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1912-17, 1929-33, 1936-46, 1949-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,750	8.7	194	336	1.7	7.8
NOVEMBER	564	11	111	106	0.95	4.5
DECEMBER	2,390	17	237	458	1.9	9.6
JANUARY	1,360	43	258	329	1.3	10.4
FEBRUARY	1,670	24	324	367	1.1	13.1
MARCH	1,770	21	396	437	1.1	16.0
APRIL	1,690	12	249	303	1.2	10.0
MAY	874	12	121	158	1.3	4.9
JUNE	171	9.4	41	38	0.93	1.7
JULY	934	13	121	167	1.4	4.9
AUGUST	898	17	234	217	0.93	9.4
SEPTEMBER	1,210	8.2	191	230	1.2	7.7
ANNUAL	930	43	206	167	0.81	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1912-18, 1929-33, 1937-47, 1950-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	14	8.9	6.9	5.5	4.3	3.6
3	15	9.4	7.4	6.1	4.8	4.1
7	15	10	8.3	7.0	5.8	5.1
14	17	11	9.2	7.8	6.4	5.7
30	20	13	10	8.8	7.3	6.4
60	26	16	12	10	8.2	7.1
90	37	21	16	12	9.1	7.5
120	53	31	23	18	14	11
183	85	50	38	30	23	20

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1911-17, 1928-46, 1948-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,940	11,500	16,800	26,100	35,400	47,000

WEIGHTED SKEW (LOGS)= 0.56
MEAN (LOGS)= 3.80
STANDARD DEV. (LOGS)= 0.32

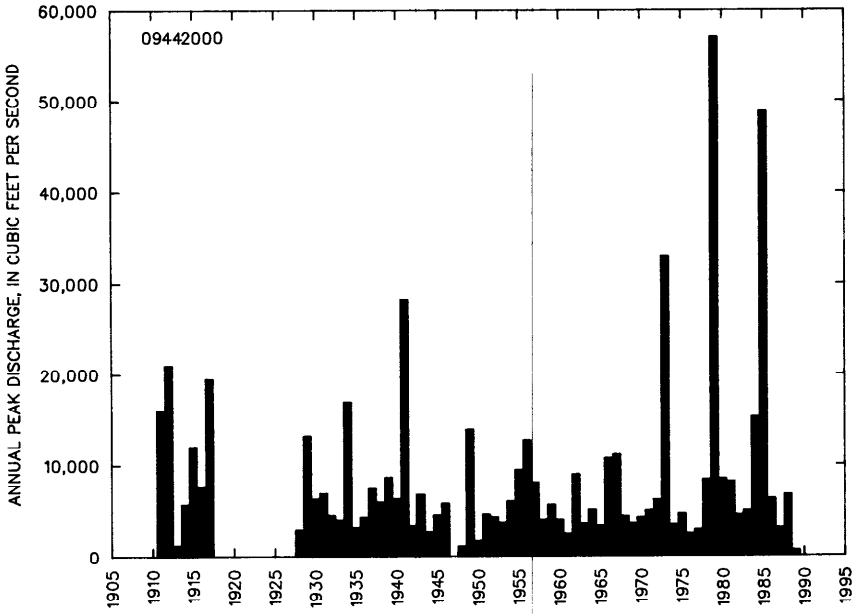
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1912-17, 1929-33, 1936-46, 1949-89

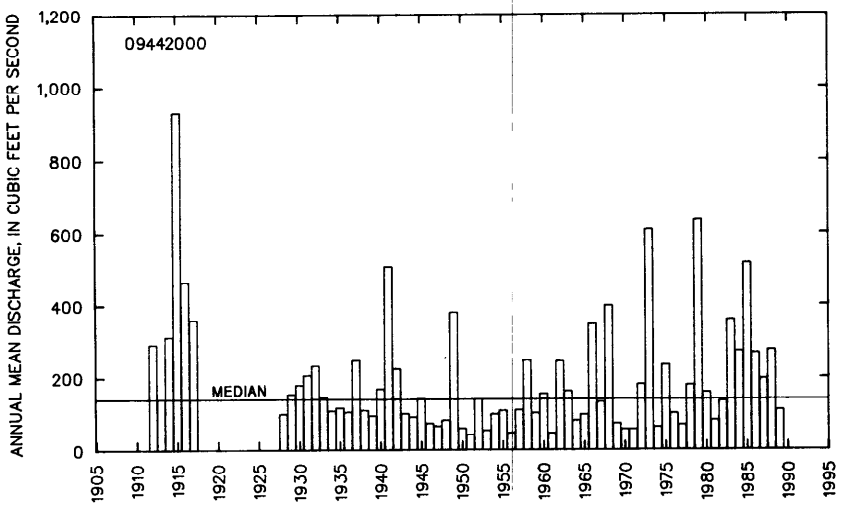
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,680	6,160	9,830	16,600	23,500	32,500
3	1,780	4,050	6,340	10,400	14,400	19,500
7	1,190	2,580	3,920	6,180	8,330	10,900
15	823	1,700	2,490	3,730	4,850	6,130
30	586	1,160	1,640	2,330	2,910	3,540
60	410	819	1,170	1,700	2,150	2,660
90	325	663	968	1,460	1,900	2,420

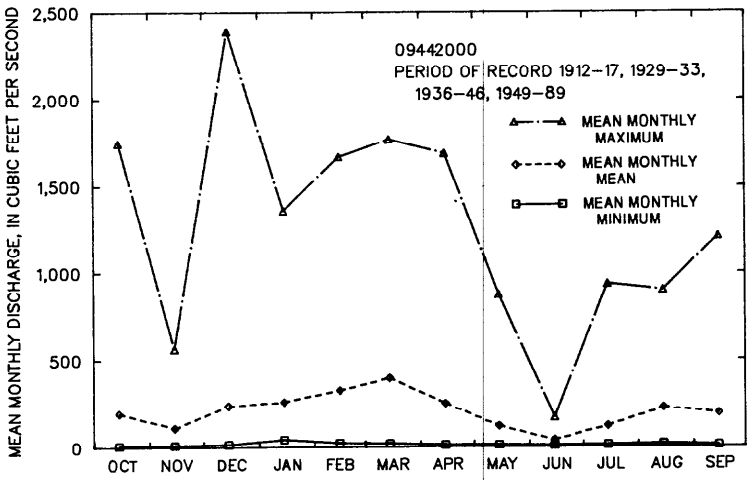
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-17, 1929-33, 1936-46, 1949-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,010	818	455	313	230	146	103	80	62	44	28	18	13	10	9.0	8.3	6.5

09442000 GILA RIVER NEAR CLIFTON, AZ--CONTINUED







09444100 CAMPBELL BLUE CREEK NEAR ALPINE, AZ

LOCATION.--Lat 33°44'46", long 109°12'17", in SE¼SE¼ sec.26, T.4 N., R.30 E., Greenlee County, Hydrologic Unit 15040004, Apache National Forest, 2.5 mi upstream from Coleman Creek, and 8 mi southwest of Alpine.

DRAINAGE AREA.--11.6 mi^2.

REMARKS.--Discharges furnished by U.S. Forest Service, Rocky Mountain Forest and Range Experimental Station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1959	10-13-58	8.2	1975	03-08-75	71
1960	03-12-60	41	1976	02-10-76	13.6
1961	08-23-61	32	1977	04-08-77	4.2
1962	01-05-62	61	1978	03-22-78	58.5
1963	08-25-63	132	1979	12-18-78	255
1964	08-10-64	48	1980	04-10-80	53.3
1965	01-07-65	33	1981	08-01-81	34
1966	03-18-66	123	1982	03-12-82	43
1967	07-31-67	17	1983	03-31-83	84
1968	04-01-68	35	1984	10-02-83	619
1969	03-28-69	37	1985	03-12-85	204
1970	03-15-70	9.6	1986	03-26-86	29.9
1971	09-08-71	3.3	1987	11-18-86	53.3
1972	10-26-71	23	1988	08-31-88	54.3
1973	10-20-72	342	1989	03-08-89	12.3
1974	03-20-74	3.7			

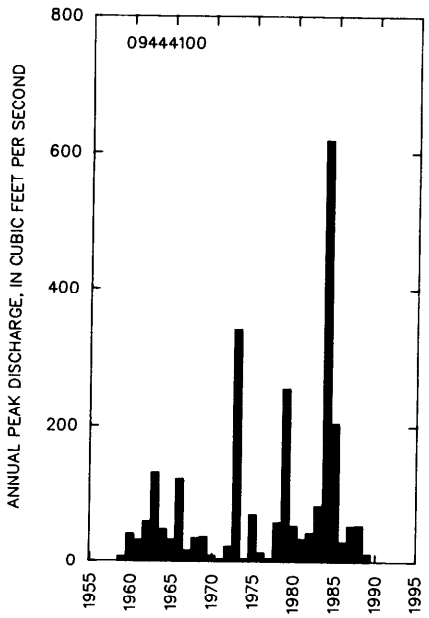
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100†
50%	20%	10%	4%	2%	1%
42	108	181	321	470	667

WEIGHTED SKEW (LOGS)= 0.24
MEAN (LOGS)= 1.64
STANDARD DEV. (LOGS)= 0.47

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
90.2	8.9	8,300	91.0	3.0	20.0	2.2	4.0

09444200 BLUE RIVER NEAR CLIFTON, AZ

LOCATION.--Lat 33°17'27", long 109°11'44", in sec.6, T.2 S., R.31 E. (unsurveyed), Greenlee County, Hydrologic Unit 15040004, in Apache National Forest, on right bank 0.1 mi downstream from county road crossing, 0.9 mi upstream from Clear Creek, 8 mi upstream from mouth, and 17 mi northeast of Clifton.

DRAINAGE AREA.--506 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	12-30-65	9,380
1968	08-09-68	6,290
1969	08-07-69	1,360
1970	07-28-70	1,180
1971	10-03-70	4,240
1972	10-25-71	2,520
1973	10-20-72	[1]30,000
1974	08-23-74	2,380
1975	09-08-75	25,500
1976	02-10-76	2,550
1977	08-19-77	1,570
1978	03-02-78	3,660
1979	11-24-78	14,700
1980	02-15-80	5,570
1981	08-07-81	1,910
1982	08-14-82	2,620
1983	07-27-83	2,040
1984	10-01-83	24,300
1985	12-28-84	7,630
1986	07-16-86	2,040
1987	07-30-87	2,910
1988	08-31-88	6,410
1989	09-22-89	1,380

[1]Highest since 1885.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
65.3	40.8	6,910	85.0	3.0	20.7	1.8	3.6

09444200 BLUE RIVER NEAR CLIFTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1969-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,030	2.6	108	260	2.4	11.6
NOVEMBER	443	3.9	47	95	2.0	5.1
DECEMBER	616	3.7	89	161	1.8	9.5
JANUARY	569	5.4	74	128	1.7	7.9
FEBRUARY	707	8.0	124	172	1.4	13.3
MARCH	584	8.9	171	182	1.1	18.3
APRIL	488	6.7	132	150	1.1	14.2
MAY	338	4.9	63	82	1.3	6.7
JUNE	46	2.9	13	12	0.91	1.4
JULY	71	7.6	25	17	0.67	2.7
AUGUST	108	8.7	37	23	0.63	4.0
SEPTEMBER	366	7.4	48	82	1.7	5.2
ANNUAL	243	10	78	74	0.95	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	3.5	2.3	1.8	1.5	1.2	1.1
3	3.6	2.3	1.8	1.5	1.2	1.1
7	3.9	2.6	2.1	1.8	1.5	1.3
14	4.4	3.0	2.4	2.1	1.7	1.5
30	5.3	3.6	3.0	2.6	2.2	2.0
60	7.4	5.0	4.2	3.7	3.3	3.1
90	10	6.3	5.0	4.2	3.5	3.1
120	13	7.9	6.0	4.8	3.8	3.2
183	17	11	9.4	8.6	8.0	7.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966, 1968-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
4,000	9,760	15,800	26,800	38,000	52,300

WEIGHTED SKEW (LOGS)= 0.17
MEAN (LOGS)= 3.61
STANDARD DEV. (LOGS)= 0.45

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1969-89

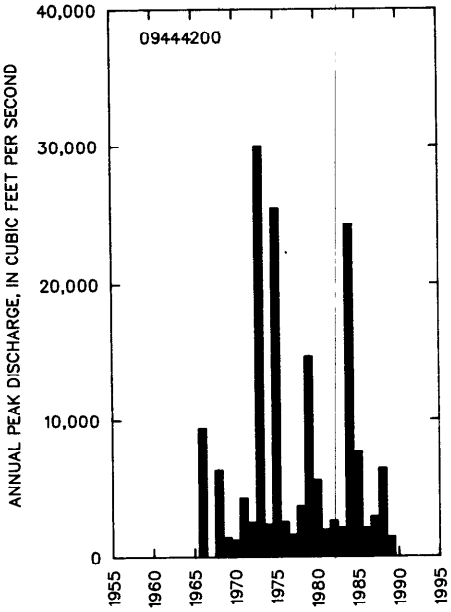
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	918	3,460	7,050	15,300	25,400	40,400
3	564	2,090	4,230	9,100	15,000	23,800
7	370	1,240	2,330	4,580	7,100	10,500
15	255	754	1,320	2,380	3,470	4,860
30	176	483	816	1,420	2,040	2,810
60	126	330	545	931	1,320	1,790
90	107	278	457	774	1,090	1,470

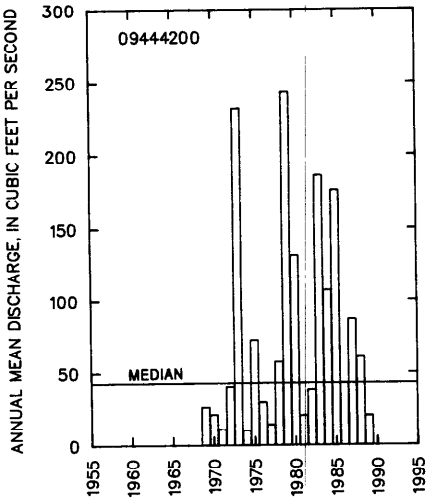
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1969-89

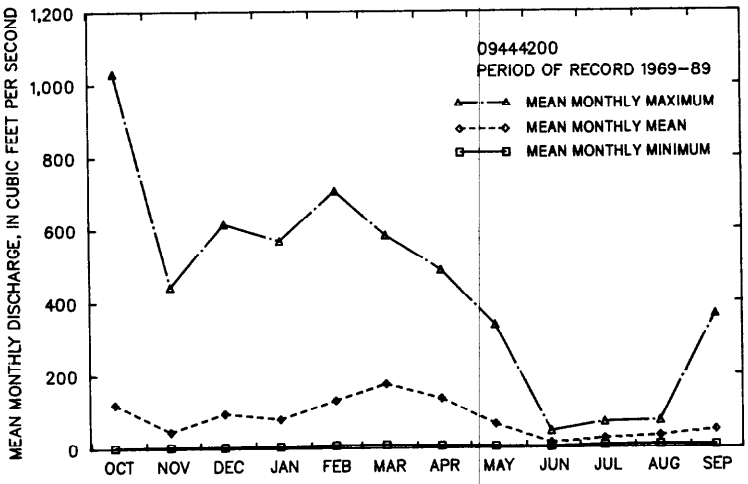
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
713	334	182	108	74	44	31	22	15	11	8.0	5.3	4.0	3.2	2.7	2.4	1.8

† Reliability of values in column is uncertain, and potential errors are large.

09444200 BLUE RIVER NEAR CLIFTON, AZ--CONTINUED







09444400 CHASE CREEK NEAR CLIFTON, AZ

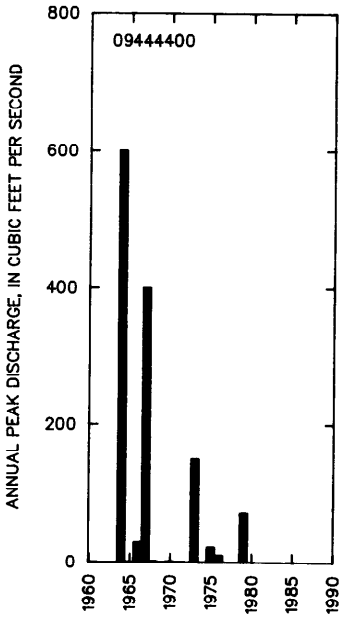
LOCATION.--Lat 33°10'20", long 109°22'10", in NW¼ sec.16, T.3 S., R.29 E., Greenlee County, Hydrologic Unit 15040004, at U.S. Highway 666, 9 miles northwest of Clifton.

DRAINAGE AREA.--1.37 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	07-25-64	600	ES
1965	00-00-65	0	
1966	12-22-65	29	
1967	08-12-67	400	
1968	00-00-68	1.0	ES
1969	00-00-69	0	
1970	08-06-70	1.0	LT
1971	00-00-71	0	
1972	00-00-72	0	
1973	10-19-72	150	
1974	00-00-74	0	
1975	09-09-75	22	
1976	00-00-76	10	LT
1979	12-18-78	[1]72.0	HP

[1]Highest since 1973.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ---
STANDARD DEV. (LOGS)= ---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
363	2.5	6,840	98.0	1.0	20.0	2.2	4.0

09444500 SAN FRANCISCO RIVER AT CLIFTON, AZ

LOCATION.--Lat 33°02'58", long 109°17'43", in SW¼SE¼ sec.30, T.4 S., R.30 E., Greenlee County, Hydrologic Unit 15040004, on downstream side of right pier at Railroad Boulevard Bridge (U.S. Highway 666), at Clifton, 9.9 mi upstream from mouth.

DRAINAGE AREA.--2,765 mi^2, of which 2.01 mi^2 is noncontributing.

REMARKS.--Diversions for mining, municipal use, and for irrigation of about 2,700 acres above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1891	02-21-91	65,000	HP	1949	01-13-49	24,100	
1905	01-10-05	60,000	HP	1950	07-27-50	825	
1906	11-27-05	65,000	HP	1951	08-29-51	735	
1907	12-03-06	[1]70,000	HP	1952	01-19-52	15,800	
1911	03-07-11	15,000		1953	08-18-53	6,090	
1912	03-10-12	20,000		1954	08-07-54	7,280	
1913	07-00-13	10,000		1955	07-23-55	8,450	
1914	07-04-14	5,000		1956	10-04-55	5,820	
1915	12-20-14	23,000		1957	07-26-57	5,230	
1916	01-19-16	59,000		1958	09-12-58	7,000	
1917	10-14-16	60,000		1959	08-28-59	11,600	
1918	00-00-18	3,000	ES	1960	01-12-60	11,800	
1919	00-00-19	15,000	ES	1961	09-10-61	7,100	
1920	00-00-20	5,500	ES	1962	09-26-62	14,300	
1921	00-00-21	16,000	ES	1963	10-18-62	12,200	
1922	00-00-22	3,500	ES	1964	07-31-64	8,670	
1923	00-00-23	10,000	ES	1965	08-02-65	5,640	
1924	00-00-24	10,000	ES	1966	12-23-65	30,500	
1925	00-00-25	16,000	ES	1967	08-12-67	34,700	
1926	00-00-26	5,000	ES	1968	12-20-67	9,480	
1927	09-12-27	4,060		1969	09-01-69	1,270	
1928	07-15-28	3,380		1970	10-21-69	902	
1929	09-23-29	5,200		1971	10-04-70	5,420	
1930	08-11-30	3,420		1972	10-25-71	9,200	
1931	09-29-31	3,330		1973	10-20-72	[2]64,000	
1932	02-10-32	10,000		1974	07-21-74	964	
1933	07-23-33	3,800		1975	09-09-75	30,000	
1934	08-26-34	11,700		1976	02-10-76	3,100	
1935	09-01-35	2,450		1977	09-05-77	2,520	
1936	02-17-36	3,700		1978	03-03-78	9,500	
1937	02-08-37	12,400		1979	12-19-78	56,000	
1938	03-04-38	4,540		1980	02-16-80	9,900	
1939	04-06-39	1,230		1981	07-09-81	1,570	
1940	09-06-40	8,700		1982	03-13-82	2,020	
1941	12-31-40	8,700		1983	03-25-83	6,060	
1942	12-11-41	7,930		1984	10-02-83	90,900	
1943	03-05-43	1,580		1985	12-28-84	27,400	
1944	09-26-44	3,800		1986	10-17-85	3,590	
1945	08-22-45	2,820		1987	11-03-86	1,940	
1946	09-05-46	1,380		1988	08-31-88	3,630	
1947	08-23-47	5,860		1989	10-15-88	882	
1948	06-01-48	5,850					

[1]Highest since 1870.
[2]Highest since 1907.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
48.9	93.2	6,880	87.0	2.9	18.1	1.6	3.4

09444500 SAN FRANCISCO RIVER AT CLIFTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1914-15, 1917, 1928-33, 1936-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4,290	23	246	656	2.7	9.5
NOVEMBER	1,450	28	116	183	1.6	4.5
DECEMBER	2,450	34	255	501	2.0	9.9
JANUARY	1,590	37	240	357	1.5	9.3
FEBRUARY	1,630	39	314	403	1.3	12.2
MARCH	2,140	44	418	480	1.2	16.2
APRIL	2,250	36	328	417	1.3	12.7
MAY	1,240	24	155	201	1.3	6.0
JUNE	178	11	53	36	0.68	2.1
JULY	657	29	107	100	0.93	4.1
AUGUST	1,360	41	204	210	1.0	7.9
SEPTEMBER	816	22	149	145	0.98	5.8
ANNUAL	937	42	215	190	0.88	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1915, 1917-18, 1929-33, 1937-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	21	14	11	9.3	7.6	6.6
3	22	15	12	11	8.8	7.8
7	24	17	14	12	10	9.0
14	27	19	16	14	12	10
30	32	23	19	16	14	12
60	40	28	24	20	17	16
90	49	34	29	25	22	20
120	57	41	35	32	28	27
183	75	51	44	39	35	33

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1891, 1905-07, 1911-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,800	17,800	30,000	53,100	77,200	109,000

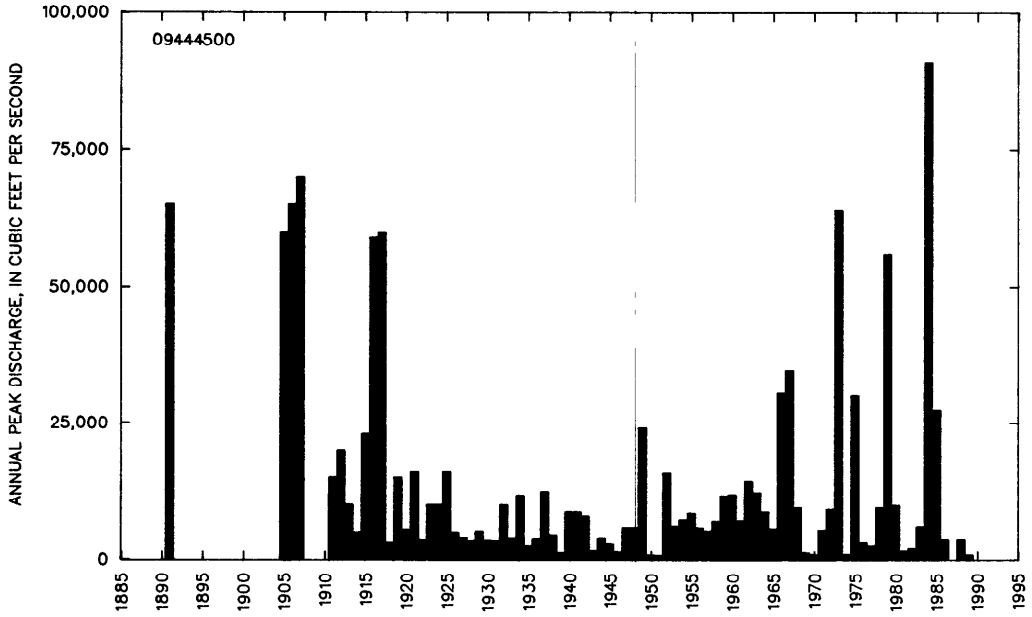
WEIGHTED SKEW (LOGS)= 0.16
MEAN (LOGS)= 3.84
STANDARD DEV. (LOGS)= 0.48

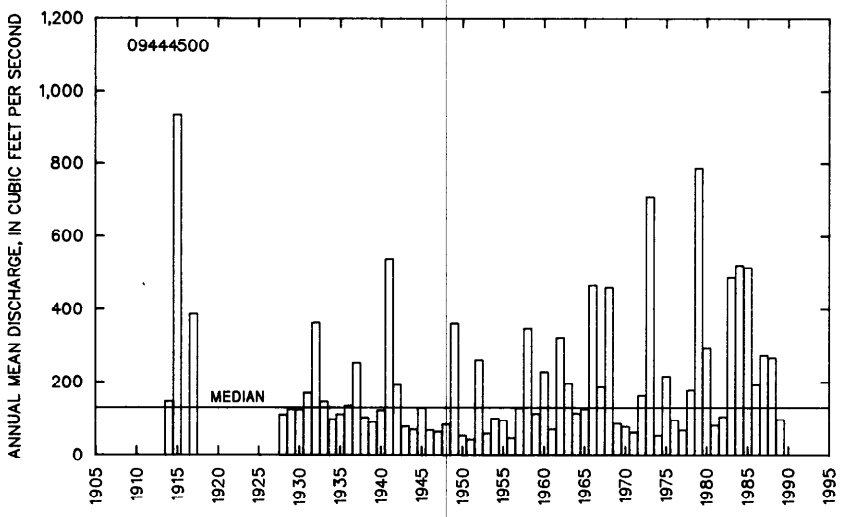
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914-15, 1917, 1928-33, 1936-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,480	7,600	14,100	27,900	44,100	67,100
3	1,620	4,700	8,480	16,300	25,200	37,700
7	1,070	2,850	4,910	8,990	13,500	19,600
15	728	1,840	3,050	5,340	7,750	10,900
30	522	1,240	1,970	3,300	4,620	6,300
60	376	857	1,340	2,170	2,980	3,980
90	303	699	1,100	1,820	2,540	3,450

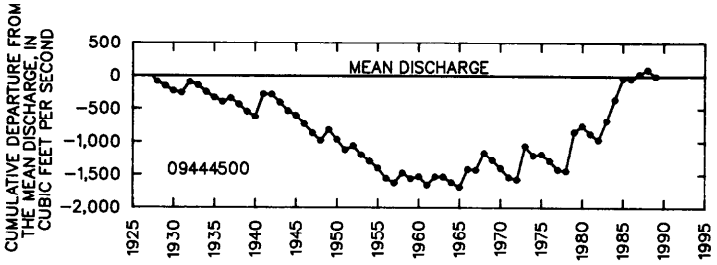
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-15, 1917, 1928-33, 1936-89

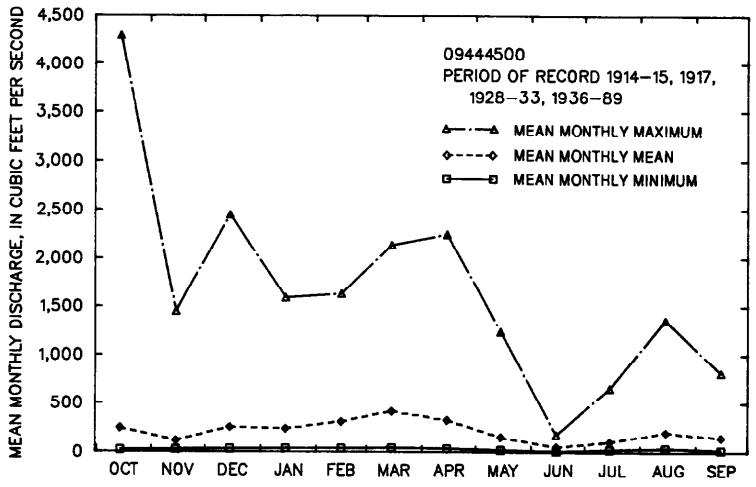
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,120	771	417	278	208	136	98	76	63	54	45	34	27	20	18	15	10


09444500
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
100,000
75,000
50,000
25,000
0
1885
1890
1895
1900
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995


09444500
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
1,200
1,000
800
600
400
200
0
MEDIAN
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995

09444500 SAN FRANCISCO RIVER AT CLIFTON, AZ--CONTINUED





09445500 WILLOW CREEK NEAR POINT OF PINES, NEAR MORENCI, AZ

LOCATION.--Lat 33°22'45", long 109°39'00", in NW¼ sec.2, T.1 S., R.26 E. Graham County, Hydrologic Unit 15040005, (unsurveyed), in San Carlos Indian Reservation, on right bank at head of Box Canyon, 4 mi east of Point of Pines, 10 mi west of Double Circle Ranch, and 23 mi northwest of Morenci.

DRAINAGE AREA.--102 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1945	03-26-45	178
1946	07-10-46	1,390
1947	08-12-47	935
1948	08-20-48	428
1949	01-13-49	744
1950	07-01-50	37
1951	08-05-51	878
1952	01-13-52	2,590
1953	07-08-53	378
1954	03-23-54	1,410
1955	08-10-55	1,140
1956	10-02-55	440
1957	08-24-57	459
1958	03-22-58	727
1959	08-01-59	1,920
1960	01-11-60	1,140
1961	08-17-61	245
1962	01-24-62	195
1963	08-21-63	825
1964	07-22-64	435
1965	01-07-65	294
1966	12-30-65	3,710
1967	09-04-67	895

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
73.0	18.3	6,340	59.0	3.0	19.8	2.0	4.0

09445500 WILLOW CREEK NEAR POINT OF PINES, NEAR MORENCI, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1945-67

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	21	0.00	9.6	6.6	0.69	7.0
NOVEMBER	17	0.00	6.8	5.7	0.84	5.0
DECEMBER	157	0.00	11	32	2.9	8.1
JANUARY	103	0.00	12	25	2.1	8.6
FEBRUARY	33	0.00	6.1	10	1.6	4.5
MARCH	76	0.00	17	18	1.1	12.4
APRIL	21	0.00	13	5.6	0.44	9.3
MAY	19	0.00	12	4.8	0.41	8.7
JUNE	22	0.00	12	5.9	0.49	8.8
JULY	25	0.06	12	6.0	0.50	8.7
AUGUST	35	4.1	15	6.2	0.42	10.9
SEPTEMBER	19	0.00	11	6.0	0.55	7.9
ANNUAL	32	1.0	11	6.3	0.55	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-67

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.28	0.00	0.00	0.00	0.00	0.00
120	1.7	0.17	0.00	0.00	0.00	0.00
183	5.6	2.7	1.5	0.48	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1945-67

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
678	1,370	1,970	2,890	3,710	4,620

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 2.83
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-67

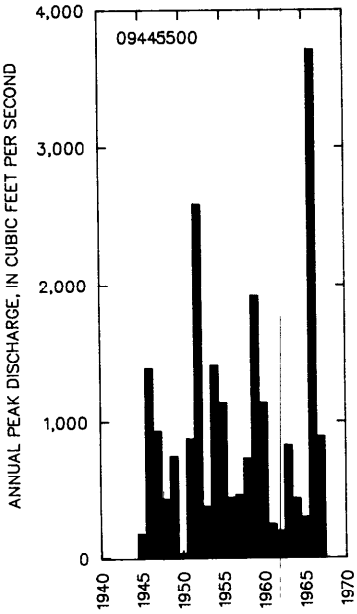
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	108	357	710	1,560	2,660	4,380
3	63	187	360	772	1,310	2,170
7	45	115	206	409	662	1,050
15	32	72	120	225	351	540
30	25	50	77	131	191	275
60	20	36	50	71	91	113
90	19	32	42	55	66	78

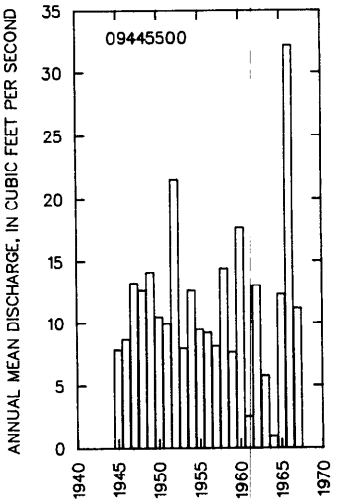
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-67

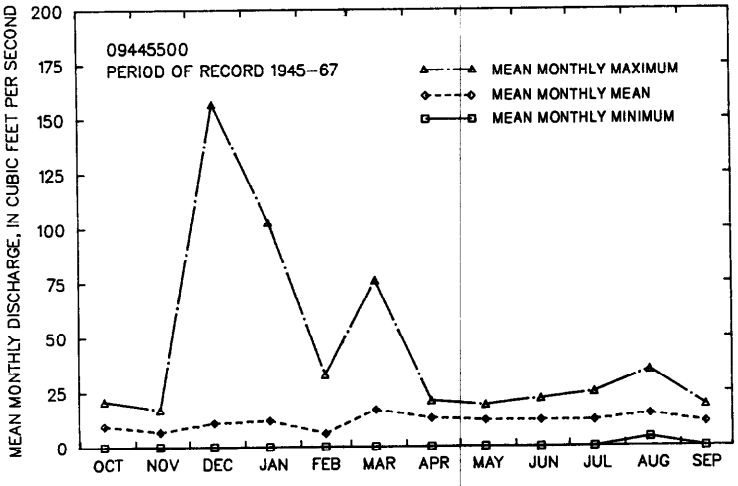
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
66	24	20	18	17	15	13	10	6.3	0.49	0.07	0.04	0.02	0.01	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09445500 WILLOW CREEK NEAR POINT OF PINES, NEAR MORENCI, AZ--CONTINUED







09446000 WILLOW CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ

LOCATION.--Lat 33°21'15", long 109°31'30", in NE¼ sec.13, T.1 S., R.27 E. Graham County, Hydrologic Unit 15040005, (unsurveyed), in San Carlos Indian Reservation, on left bank 1 mi upstream from lower end of Box Canyon, 2.25 mi northwest of Double Circle Ranch, 2.5 mi upstream from mouth, an 19 mi northwest of Morenci.

DRAINAGE AREA.--149 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1944	09-28-44	1,100		1957	08-24-57	630	
1945	03-27-45	134		1958	03-22-58	1,640	
1946	07-10-46	1,240		1959	08-01-59	3,520	
1947	07-22-47	629		1960	01-11-60	2,380	
1948	08-20-48	164		1961	09-11-61	950	
1949	01-13-49	2,010		1962	01-25-62	378	
1950	12-11-49	28		1963	08-22-63	1,020	
1951	08-05-51	1,370		1964	07-31-64	2,040	
1952	01-13-52	4,230		1965	08-01-65	4,880	
1953	07-08-53	202		1966	12-30-65	7,500	
1954	03-23-54	1,610		1967	07-24-67	1,750	
1955	08-06-55	2,840		1973	10-20-72	[1]6,500	KR,HP
1956	10-03-55	122					

[1]Highest since 1944.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
77.7	27.5	6,310	63.0	3.0	19.2	2.0	3.9

09446000 WILLOW CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1945-67

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	22	0.84	10	6.1	0.61	6.3
NOVEMBER	19	0.86	8.1	5.6	0.69	5.0
DECEMBER	273	0.93	18	56	3.1	11.2
JANUARY	163	0.90	19	40	2.1	11.8
FEBRUARY	36	0.86	7.9	11	1.4	4.9
MARCH	103	0.79	19	23	1.2	11.8
APRIL	23	0.76	13	5.4	0.41	8.3
MAY	19	0.59	12	4.8	0.42	7.2
JUNE	20	0.03	11	5.7	0.51	7.0
JULY	24	0.40	13	5.6	0.44	7.9
AUGUST	55	6.3	19	9.8	0.52	11.6
SEPTEMBER	20	0.43	11	5.4	0.48	7.0
ANNUAL	42	2.8	13	8.3	0.62	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-67

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.71	0.19	0.02	0.00	0.00	0.00
3	0.77	0.22	0.02	0.00	0.00	0.00
7	0.87	0.28	0.05	0.00	0.00	0.00
14	0.87	0.32	0.10	0.00	0.00	0.00
30	1.0	0.46	0.24	0.00	0.00	0.00
60	1.4	0.59	0.37	0.25	0.16	0.12
90	1.9	0.94	0.69	0.54	0.43	0.37
120	3.0	1.7	1.2	0.97	0.76	0.65
183	6.8	3.8	2.7	2.0	1.3	1.0

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1944-67, 1973

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,430	2,910	4,200	6,210	7,990	10,000

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 3.15
STANDARD DEV. (LOGS)= 0.37

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-67

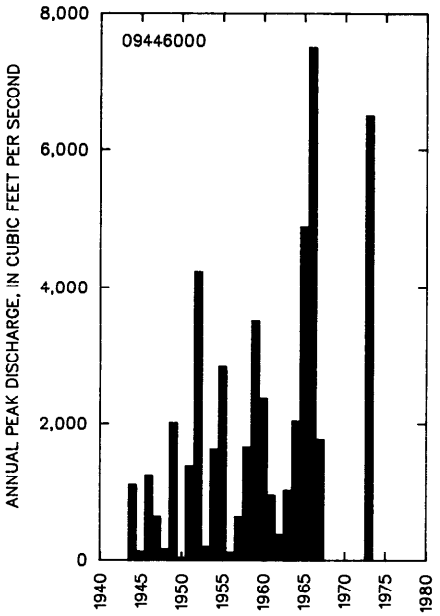
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	181	593	1,150	2,400	3,930	6,200
3	96	300	582	1,250	2,100	3,430
7	63	176	326	668	1,100	1,760
15	42	106	188	374	610	975
30	31	68	114	210	326	499
60	23	45	68	112	158	222
90	20	37	54	83	113	150

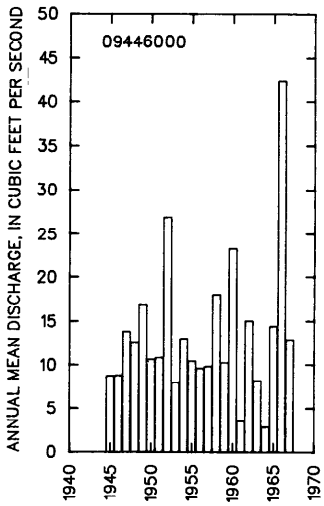
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-67

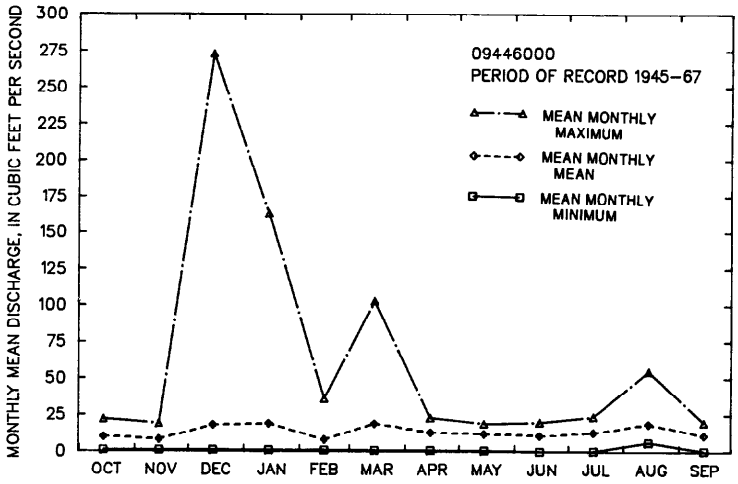
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
83	26	21	18	16	14	12	10	7.3	2.9	1.4	0.97	0.67	0.27	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09446000 WILLOW CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ--CONTINUED







09446500 EAGLE CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ

LOCATION.--Lat 33°18'00", long 109°29'30", in SW¼ sec.32, T.1 S., R.28 E. Graham County, Hydrologic Unit 15040005, (unsurveyed), on left bank 0.5 mi upstream from head of Box Canyon, 2.75 mi downstream from Willow Creek, 3.25 mi downstream from Double Circle Ranch, and 17 mi northwest of Morenci.

DRAINAGE AREA.--377 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1944	09-11-44	2,400		1957	08-01-57	1,610	
1945	08-06-45	798		1958	09-10-58	7,270	
1946	07-10-46	1,160		1959	08-01-59	3,200	
1947	08-25-47	2,070		1960	01-12-60	4,990	
1948	08-21-48	135		1961	09-11-61	2,470	
1949	01-13-49	2,400		1962	01-25-62	612	
1950	07-28-50	874		1963	08-21-63	3,920	
1951	08-28-51	1,470		1964	09-10-64	6,390	
1952	01-13-52	7,000		1965	08-01-65	3,510	
1953	08-01-53	456		1966	12-30-65	13,600	
1954	08-24-54	4,380		1967	08-11-67	6,000	
1955	08-21-55	2,680		1973	10-20-72	[1]30,000	HP
1956	07-31-56	1,410					

[1]Highest since 1944.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
100	29.2	6,410	75.0	3.0	20.0	2.0	3.9

09446500 EAGLE CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1945-67

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	33	5.7	18	5.9	0.33	5.7
NOVEMBER	22	5.2	14	5.3	0.38	4.5
DECEMBER	502	4.7	36	103	2.9	11.6
JANUARY	310	4.7	41	76	1.8	13.3
FEBRUARY	101	4.1	22	27	1.2	7.1
MARCH	213	5.9	41	48	1.2	13.1
APRIL	89	4.3	27	18	0.64	8.9
MAY	25	5.3	18	4.3	0.24	5.7
JUNE	25	3.7	16	4.6	0.30	5.0
JULY	36	13	21	6.3	0.30	6.7
AUGUST	93	13	38	25	0.66	12.1
SEPTEMBER	42	11	20	8.8	0.45	6.4
ANNUAL	81	11	26	16	0.62	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-67

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	4.1	3.1	2.7	2.3	2.0	1.9
3	4.2	3.1	2.7	2.4	2.1	1.9
7	4.4	3.3	2.9	2.6	2.3	2.2
14	5.1	3.9	3.4	3.1	2.8	2.7
30	5.8	4.5	4.0	3.8	3.5	3.4
60	6.8	5.0	4.4	3.9	3.6	3.3
90	7.5	5.4	4.6	4.1	3.6	3.4
120	9.1	6.6	5.6	5.0	4.3	3.9
183	12	9.4	8.2	7.3	6.5	6.0

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1944-67, 1973

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
2,510	5,690	8,760	13,900	18,800	24,600

WEIGHTED SKEW (LOGS)= 0.03
MEAN (LOGS)= 3.40
STANDARD DEV. (LOGS)= 0.42

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-67

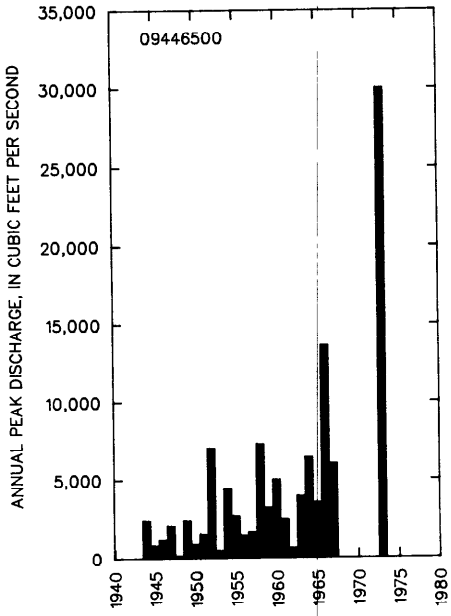
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	290	908	1,780	3,850	6,550	10,800
3	181	532	1,000	2,090	3,460	5,550
7	121	326	584	1,140	1,810	2,790
15	85	215	376	719	1,130	1,720
30	65	147	238	415	608	871
60	48	97	147	238	332	454
90	39	75	113	182	254	349

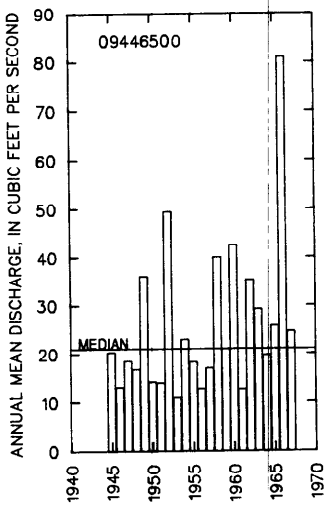
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-67

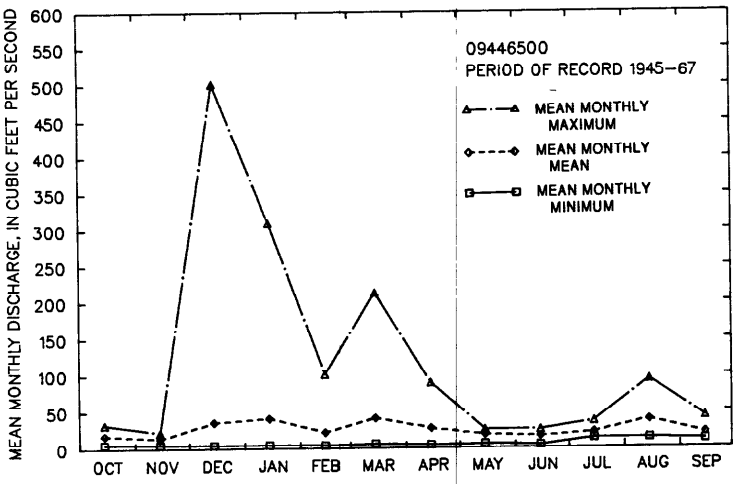
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
193	70	38	27	24	20	18	16	14	11	7.9	5.6	4.9	4.2	3.8	2.9	2.4

† Reliability of values in column is uncertain, and potential errors are large.

09446500 EAGLE CREEK NEAR DOUBLE CIRCLE RANCH, NEAR MORENCI, AZ--CONTINUED







09447000 EAGLE CREEK ABOVE PUMPING PLANT, NEAR MORENCI, AZ

LOCATION.--Lat 33°04'18", long 109°27'10", in SE¼NE¼ sec.22, T.4 S., R.28 E., Greenlee County, Hydrologic Unit 15040005, on left bank 3 mi upstream from Phelps Dodge Corp. pumping plant, 5 mi west of Morenci, and 13 mi upstream from mouth.

DRAINAGE AREA.--613 mi2.

REMARKS.--Diversions above station for irrigation of about 500 acres, mostly above Willow Creek.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-18-16	36,000	ES,HP	1966	12-30-65	21,000	
1932	02-10-32	13,000	HP	1967	08-12-67	7,650	
1944	00-00-44	7,500		1968	12-20-67	3,300	
1945	08-11-45	433		1969	07-25-69	250	
1946	08-07-46	384		1970	07-23-70	560	
1947	08-08-47	710		1971	08-22-71	1,680	
1948	08-05-48	300		1972	07-16-72	6,650	
1949	01-13-49	2,500		1973	10-19-72	14,000	
1950	07-28-50	470		1974	08-03-74	630	
1951	08-28-51	1,260		1975	09-09-75	1,550	
1952	01-14-52	5,340		1976	07-29-76	2,250	
1953	07-25-53	2,780		1977	07-31-77	2,190	
1954	07-22-54	4,930		1978	03-02-78	3,900	
1955	08-06-55	3,260		1979	12-18-78	24,500	
1956	07-30-56	452		1980	02-15-80	9,000	
1957	07-26-57	4,210		1981	08-07-81	3,380	
1958	09-10-58	6,150		1982	08-23-82	1,720	
1959	08-17-59	4,780		1983	03-25-83	6,210	
1960	01-12-60	5,350		1984	10-02-83	[1]36,400	
1961	09-12-61	1,210		1985	12-28-84	8,400	
1962	07-18-62	1,850		1986	10-17-85	1,030	
1963	08-30-63	6,150		1987	11-03-86	1,990	
1964	07-15-64	8,620		1988	08-15-88	3,770	
1965	08-01-65	3,080		1989	08-18-89	97	

[1]Highest since 1916.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
60.9	52.5	6,060	64.0	2.8	19.2	2.0	3.8

09447000 EAGLE CREEK ABOVE PUMPING PLANT, NEAR MORENCI, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1945-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,170	13	65	176	2.7	9.3
NOVEMBER	228	10	33	34	1.0	4.8
DECEMBER	884	11	86	170	2.0	12.4
JANUARY	1,080	11	92	179	1.9	13.2
FEBRUARY	989	11	94	174	1.9	13.4
MARCH	700	14	96	131	1.4	13.8
APRIL	214	11	50	40	0.79	7.2
MAY	81	9.2	31	15	0.50	4.4
JUNE	40	5.3	23	8.4	0.37	3.3
JULY	98	16	37	18	0.48	5.4
AUGUST	203	19	56	41	0.73	8.0
SEPTEMBER	114	13	33	18	0.55	4.8
ANNUAL	239	17	58	49	0.85	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1945-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	11	6.8	5.2	4.1	3.0	2.5
3	12	7.2	5.4	4.3	3.2	2.7
7	13	7.9	6.0	4.7	3.6	2.9
14	14	9.2	7.1	5.6	4.3	3.6
30	16	11	8.5	6.9	5.3	4.5
60	18	12	10	8.5	7.0	6.2
90	19	13	11	9.5	8.0	7.2
120	21	15	13	11	9.5	8.5
183	25	19	16	15	13	12

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1944-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,770	7,310	11,900	19,500	26,300	34,200

WEIGHTED SKEW (LOGS)= -0.34
MEAN (LOGS)= 3.39
STANDARD DEV. (LOGS)= 0.55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-89

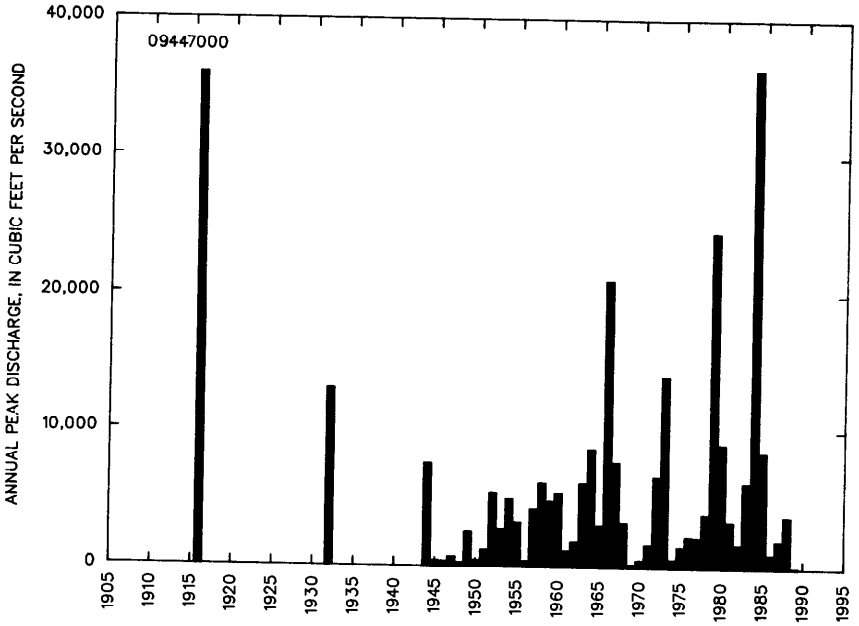
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	652	2,330	4,660	9,940	16,400	25,900
3	393	1,380	2,800	6,230	10,700	17,600
7	250	814	1,600	3,470	5,870	9,580
15	169	498	933	1,910	3,120	4,950
30	125	330	580	1,110	1,720	2,600
60	91	224	381	707	1,080	1,620
90	74	175	293	532	804	1,190

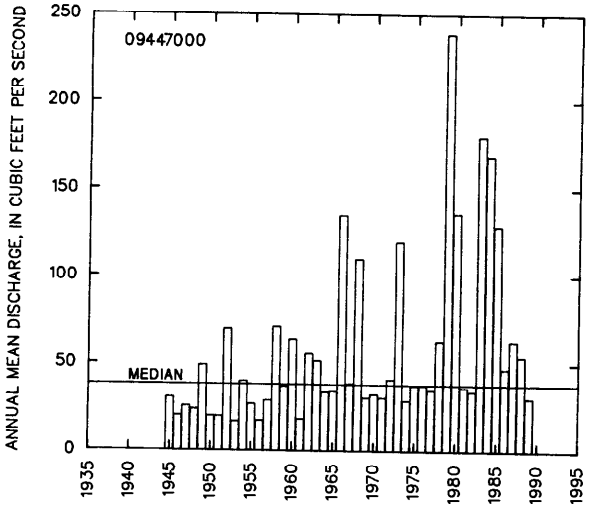
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-89

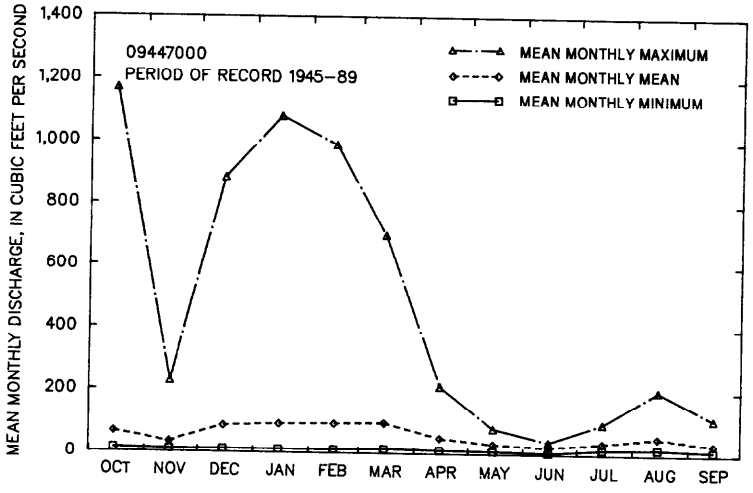
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
533	153	80	55	46	37	33	28	25	21	18	14	12	10	8.8	6.9	4.1

† Reliability of values in column is uncertain, and potential errors are large.

09447000 EAGLE CREEK ABOVE PUMPING PLANT, NEAR MORENCI, AZ--CONTINUED







GILA RIVER BASIN

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ

LOCATION.--Lat 32°52'06", long 109°30'38", in SE¼NE¼ sec.31, T.6 S., R.28 E., Graham County, Hydrologic Unit 15040005, on left bank 0.6 mi downstream from intake of Brown Canal, 8 mi northeast of Solomon, and 17 mi downstream from San Francisco River. Records include flow of Brown Canal, which is measured 2,000 ft downstream from intake.

DRAINAGE AREA.--7,896 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1914	08-21-14	9,000	1952	01-19-52	19,700
1915	12-20-14	50,000	1953	07-30-53	3,040
1916	01-19-16	[1]100,000	1954	03-24-54	9,850
1917	10-14-16	67,900	1955	07-24-55	11,700
1918	07-01-18	2,700	1956	10-04-55	13,300
1919	08-03-19	15,000	1957	07-26-57	5,980
1920	12-05-19	7,620	1958	03-23-58	9,060
1921	08-21-21	15,700	1959	08-28-59	7,860
1922	08-15-22	3,780	1960	01-12-60	16,700
1923	08-12-23	12,600	1961	09-10-61	4,800
1924	12-28-23	10,600	1962	09-26-62	16,100
1925	09-03-25	15,900	1963	10-19-62	9,350
1926	04-07-26	5,660	1964	07-15-64	9,880
1927	09-13-27	9,320	1965	08-02-65	4,800
1928	08-01-28	3,230	1966	12-22-65	43,000
1929	07-30-29	12,700	1967	08-12-67	34,800
1930	08-11-30	10,100	1968	12-20-67	9,280
1931	02-15-31	10,500	1969	09-11-69	2,460
1932	02-10-32	24,000	1970	08-06-70	2,250
1933	09-09-33	9,600	1971	10-03-70	4,510
1934	08-27-34	23,000	1972	10-25-71	10,200
1935	09-01-35	5,550	1973	10-20-72	[2]82,400
1936	02-17-36	8,000	1974	08-16-74	3,280
1937	02-08-37	23,700	1975	09-09-75	35,000
1938	03-04-38	4,690	1976	02-11-76	3,400
1939	08-06-39	7,370	1977	08-13-77	2,540
1940	09-06-40	9,840	1978	03-02-78	21,600
1941	09-30-41	31,900	1979	12-19-78	100,000
1942	12-12-41	7,730	1980	02-16-80	25,300
1943	09-27-43	6,680	1981	07-12-81	7,000
1944	09-25-44	15,800	1982	10-03-81	5,240
1945	08-11-45	4,820	1983	03-25-83	11,300
1946	10-09-45	5,100	1984	10-02-83	[1]132,000
1947	08-30-47	9,250	1985	12-29-84	60,200
1948	06-01-48	2,540	1986	10-17-85	7,690
1949	01-14-49	25,200	1987	11-03-86	3,020
1950	07-30-50	1,240	1988	09-23-88	7,820
1951	08-03-51	4,240	1989	10-15-88	891

[1]Highest since 1906.
[2]Highest since 1916.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
26.4	177	6,360	58.0	2.8	16.7	1.7	3.4

MEAN MONTHLY AND ANNUAL DISCHARGES 1921-33, 1936-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	7,450	40	403	1,060	2.6	7.7
NOVEMBER	2,230	49	240	286	1.2	4.6
DECEMBER	5,800	60	494	928	1.9	9.5
JANUARY	3,370	93	490	682	1.4	9.4
FEBRUARY	3,870	103	680	875	1.3	13.1
MARCH	3,380	82	801	913	1.1	15.4
APRIL	2,780	64	568	618	1.1	10.9
MAY	2,040	38	291	364	1.3	5.6
JUNE	388	20	100	77	0.77	1.9
JULY	735	44	218	152	0.70	4.2
AUGUST	2,500	66	528	525	0.99	10.2
SEPTEMBER	2,080	36	392	399	1.0	7.5
ANNUAL	1,680	101	433	334	0.77	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1922-33, 1937-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	40	26	21	17	14	12
3	41	27	22	18	15	13
7	44	29	24	20	17	15
14	48	32	27	23	19	17
30	57	38	31	26	22	19
60	75	50	40	34	28	25
90	98	64	52	44	36	32
120	128	87	71	59	48	42
183	176	118	99	86	74	68

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1914-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
9,400	22,900	38,000	66,900	98,000	140,000

WEIGHTED SKEW (LOGS)= 0.38
MEAN (LOGS)= 4.00
STANDARD DEV. (LOGS)= 0.44

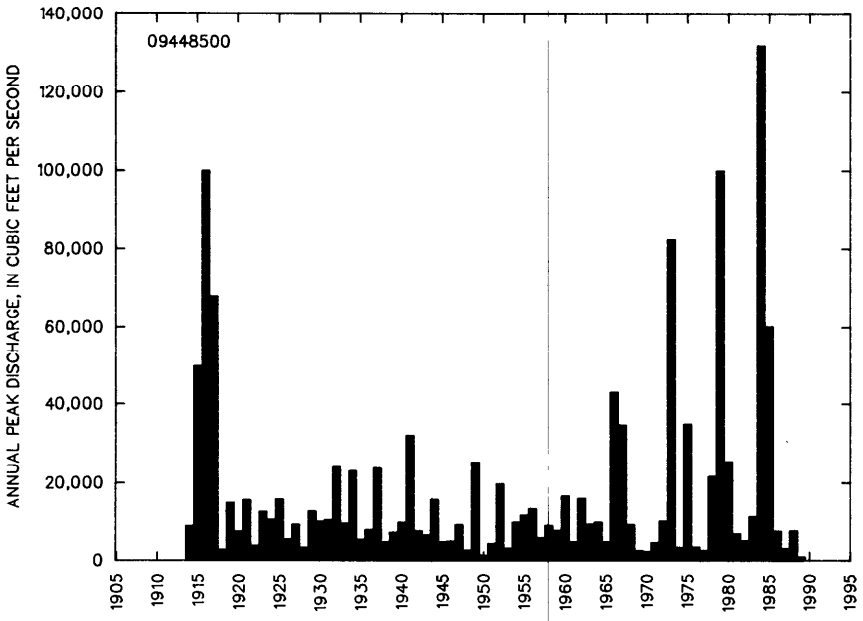
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1921-33, 1936-89

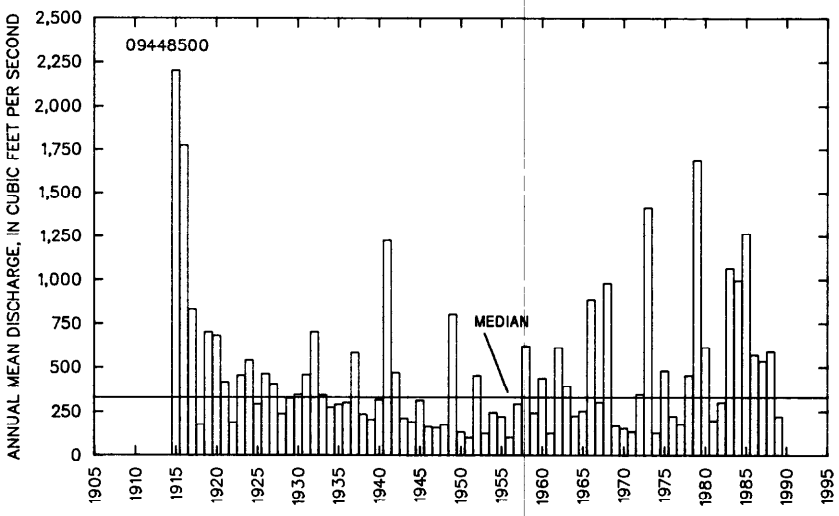
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,680	12,300	21,200	39,000	58,800	86,200
3	3,340	8,500	14,300	25,700	38,200	55,000
7	2,300	5,450	8,790	14,900	21,200	29,400
15	1,640	3,630	5,570	8,880	12,100	16,000
30	1,190	2,480	3,670	5,610	7,390	9,500
60	853	1,750	2,550	3,840	5,000	6,350
90	678	1,410	2,090	3,200	4,230	5,470

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1921-33, 1936-89

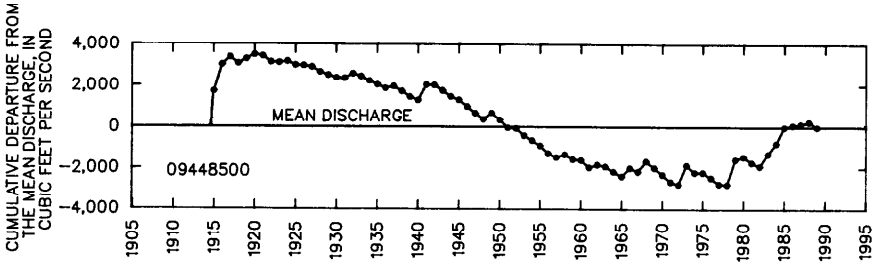
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,970	1,630	932	607	456	296	214	174	144	117	91	62	47	35	29	25	18

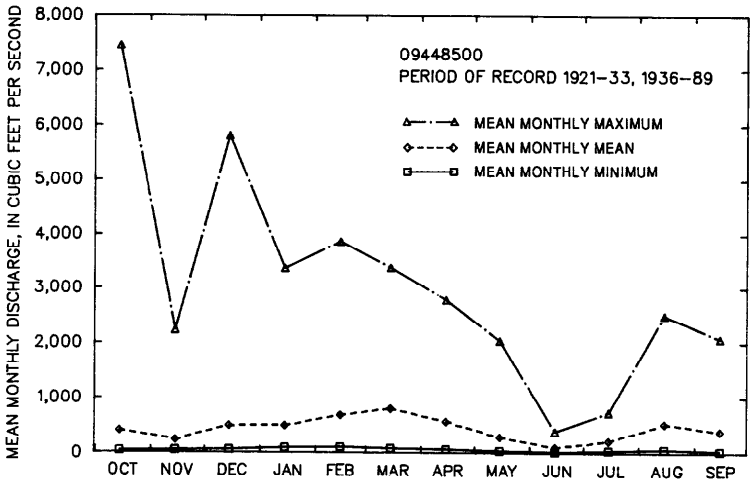
09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ--CONTINUED





09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ--CONTINUED





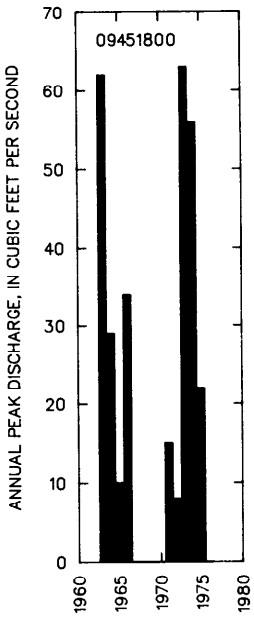
09451800 TOLLGATE WASH TRIBUTARY NEAR CLIFTON, AZ

LOCATION.--Lat 32°51'00", long 109°20'15", in SW¼ sec.1, T.7 S., R.29 E., Graham County, Hydrologic Unit 15040005, at U.S. Highway 666, at Graham-Greenlee County line 14 miles south of Clifton.

DRAINAGE AREA.--0.12 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	07-19-63	62	
1964	00-00-64	29	
1965	09-03-65	10	
1966	09-15-66	34	
1967	00-00-67	0	
1968	00-00-68	0	
1969	00-00-69	0	
1970	00-00-70	0	
1971	10-02-70	15	
1972	00-00-72	8.0	LT
1973	10-19-72	63	
1974	08-23-74	56	
1975	07-24-75	22	
1976	00-00-76	0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
11.4	39.7	70.5	123	170	225

WEIGHTED SKEW (LOGS)= -0.54
MEAN (LOGS)= 0.99
STANDARD DEV. (LOGS)= 0.71

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
878	0.60	4,800	0.0	1.0	13.5	1.8	3.4

GILA RIVER BASIN

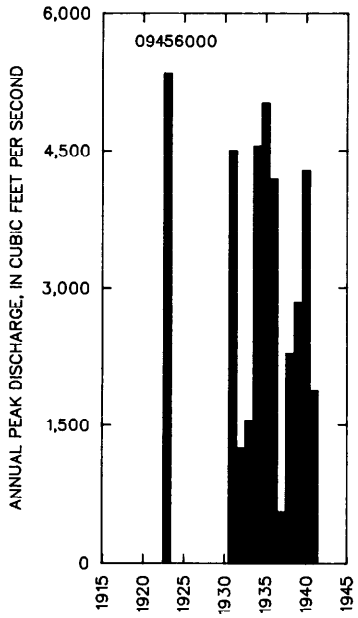
09456000 SAN SIMON RIVER NEAR SAN SIMON, AZ

LOCATION.--Lat 32°13'30", long 109°10'30", in SW¼ sec.10, T.14 S., R.31 E., Cochise County, Hydrologic Unit 15040006, 4.5 mi southeast of San Simon.

DRAINAGE AREA.--814 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1923	07-21-23	5,350	HP
1931	08-10-31	4,500	
1932	07-25-32	1,250	
1933	08-04-33	1,550	
1934	08-00-34	4,550	
1935	08-28-35	5,020	
1936	08-18-36	4,190	
1937	08-09-37	548	
1938	06-29-38	2,280	
1939	08-13-39	2,840	
1940	06-29-40	4,280	
1941	08-15-41	1,870	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1923, 1931-41

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
2,920	4,520	5,570	6,860	7,770	8,660

WEIGHTED SKEW (LOGS)= -0.41
MEAN (LOGS)= 3.45
STANDARD DEV. (LOGS)= 0.24

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
23.8	64.6	4,830	23.0	2.3	14.9	1.9	3.6

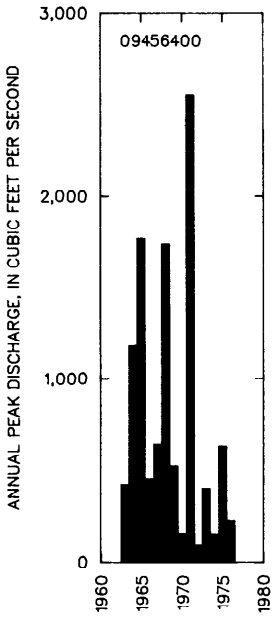
09456400 GOLD GULCH NEAR BOWIE, AZ

LOCATION.--Lat 32°20'52", long 109°36'10", in SW¼NW¼ sec.33, T.12 S., R.27 E., Cochise County, Hydrologic Unit 15040006, 100 ft upstream from State Highway 86, 7 miles west of Bowie.

DRAINAGE AREA.--15.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-23-63	420	
1964	08-18-64	1,180	
1965	08-29-65	1,770	
1966	08-07-66	450	ES
1967	07-07-67	640	
1968	12-20-67	1,740	
1969	09-11-69	520	
1970	07-20-70	150	ES
1971	08-18-71	2,550	
1972	00-00-72	90	LT
1973	10-00-72	400	
1974	08-24-74	147	
1975	07-22-75	630	
1976	00-00-76	225	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
527	1,180	1,790	2,760	3,630	4,640

WEIGHTED SKEW (LOGS)=	-0.11
MEAN (LOGS)=	2.71
STANDARD DEV. (LOGS)=	0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
201	9.6	5,170	0.0	2.0	10.9	1.8	4.4

GILA RIVER BASIN

09457000 SAN SIMON RIVER NEAR SOLOMON, AZ

LOCATION.--Lat 32°48'06", long 109°38'19", in NW¼NE¼ sec.25, T.7 S., R.26 E., Graham County, Hydrologic Unit 15040006, 1.0 mi southwest of Solomon and 2.2 mi upstream from mouth.

DRAINAGE AREA.--2,192 mi^2.

REMARKS.--Records do not include waste water passing station from San Jose Canal, which diverts from Gila River. Irrigation of about 34,000 acres above station, mostly by pumping from ground water. Floodflows are partly regulated by flood-control detention structures on main stream and tributaries; combined maximum capacity in excess of 10,500 acre-ft.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1931	08-09-31	[1]27,500		1958	08-16-58	4,250	UR
1932	07-30-32	8,800		1959	08-23-59	4,610	UR
1933	07-16-33	4,000		1960	09-09-60	3,260	UR
1934	08-00-34	11,500		1961	08-22-61	7,750	UR
1935	08-01-35	12,000		1962	09-26-62	3,970	UR
1936	09-10-36	10,600		1963	08-26-63	5,170	UR
1937	08-21-37	2,370		1964	07-14-64	5,800	UR
1938	07-12-38	4,500		1965	08-29-65	4,880	UR
1939	08-14-39	2,140		1966	09-15-66	2,250	UR
1940	09-05-40	6,080		1967	08-12-67	5,570	UR
1941	08-17-41	13,000		1968	07-02-68	3,870	UR
1942	09-11-42	5,000		1969	07-10-69	2,310	UR
1943	08-15-43	6,430		1970	08-17-70	1,010	UR
1944	09-25-44	5,900		1971	09-23-71	3,310	UR
1945	08-10-45	7,350		1972	08-26-72	4,570	UR
1946	08-30-46	4,820		1973	10-19-72	1,820	UR
1947	06-18-47	2,700		1974	08-15-74	4,840	UR
1948	08-06-48	5,880		1975	09-08-75	3,690	UR
1949	08-08-49	8,100		1976	09-24-76	3,070	UR
1950	09-18-50	2,060		1977	08-22-77	3,010	UR
1951	08-02-51	7,390		1978	07-22-78	1,630	UR
1952	08-17-52	5,100		1979	08-14-79	4,370	UR
1953	07-07-53	3,970	UR	1980	08-13-80	484	UR
1954	09-12-54	6,980	UR	1981	09-17-81	3,560	UR
1955	07-30-55	6,400	UR	1982	07-26-82	4,430	UR
1956	10-04-55	1,520	UR	1984	10-02-83	5,500	UR,HP
1957	08-30-57	8,950	UR				

[1]Highest since 1880.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
14.6	119	4,270	11.0	2.3	12.2	1.8	3.4

09457000 SAN SIMON RIVER NEAR SOLOMON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1932, 1936-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	71	0.00	8.8	17	1.9	6.3
NOVEMBER	8.0	0.00	0.65	1.9	2.9	0.5
DECEMBER	25	0.00	1.1	4.1	3.6	0.8
JANUARY	8.0	0.00	0.45	1.6	3.5	0.3
FEBRUARY	14	0.00	0.86	3.0	3.4	0.6
MARCH	5.5	0.00	0.20	0.85	4.4	0.1
APRIL	15	0.00	0.52	2.5	4.8	0.4
MAY	11	0.00	0.44	1.7	3.9	0.3
JUNE	20	0.00	1.6	4.1	2.6	1.2
JULY	274	0.00	32	44	1.4	23.0
AUGUST	328	0.00	68	74	1.1	49.1
SEPTEMBER	176	0.00	24	32	1.4	17.3
ANNUAL	38	1.4	12	8.8	0.75	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.58	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1931-82, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,520	7,250	9,320	12,200	14,500	17,000

WEIGHTED SKEW (LOGS)= 0.05
MEAN (LOGS)= 3.66
STANDARD DEV. (LOGS)= 0.24

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932, 1936-82

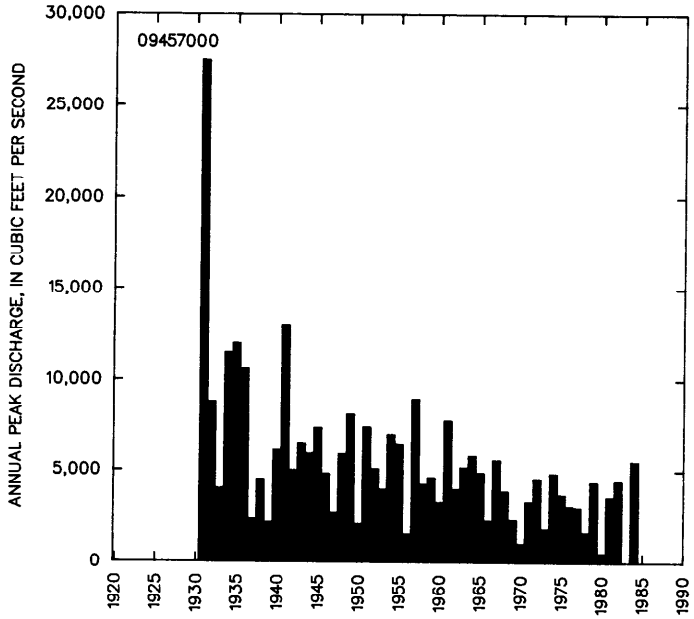
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	721	1,260	1,670	2,230	2,670	3,130
3	381	725	1,010	1,420	1,770	2,160
7	197	389	556	817	1,050	1,310
15	117	237	340	498	635	790
30	72	147	212	312	401	501
60	45	91	130	188	239	295
90	32	63	89	129	163	201

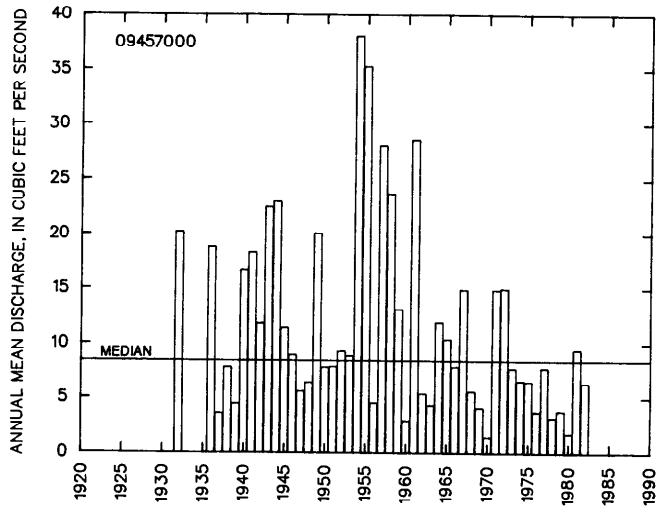
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932, 1936-82

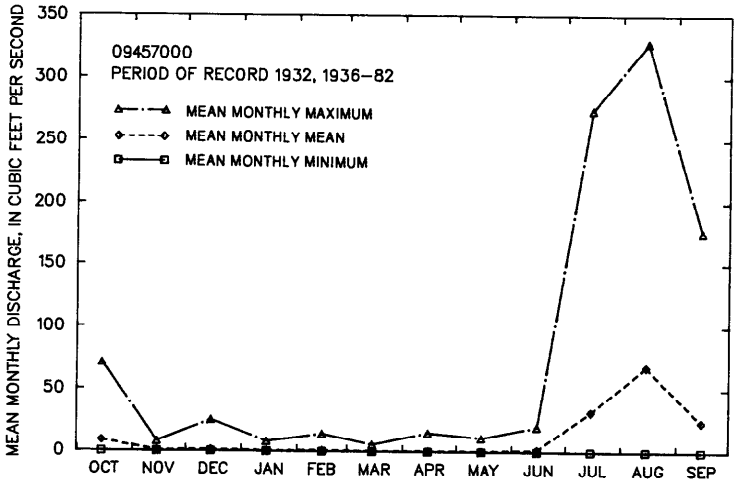
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
329	25	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09457000 SAN SIMON RIVER NEAR SOLOMON, AZ--CONTINUED







09458200 DEADMAN CREEK NEAR SAFFORD, AZ

LOCATION.--Lat 32°43'59", long 109°48'57", in SW¼ sec.17, T.8 S., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 1504005, in Coronado National Forest, on left bank 9 mi southwest of Safford.

DRAINAGE ARA.--4.99 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	08-11-67	89	
1968	12-19-67	96	
1969	12-26-68	12	
1970	08-07-70	21	
1971	09-08-71	12	
1972	08-26-72	82	
1973	10-19-72	119	
1974	08-06-74	57	
1975	09-06-75	82	
1976	02-09-76	43	
1979	12-18-78	2,760	HP
1987	11-03-86	33	
1989	09-04-89	74	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
1,100	4.1	7,520	48.0	1.0	25.0	1.9	3.8

09458200 DEADMAN CREEK NEAR SAFFORD, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-76, 1987, 1989

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4.1	0.00	0.96	1.3	1.3	6.0
NOVEMBER	3.3	0.08	0.80	1.0	1.3	5.0
DECEMBER	4.5	0.13	1.3	1.5	1.2	8.1
JANUARY	2.9	0.15	0.94	0.83	0.88	5.9
FEBRUARY	7.1	0.14	1.7	2.2	1.3	10.4
MARCH	7.0	0.12	2.1	2.4	1.1	13.3
APRIL	6.6	0.13	2.2	2.4	1.1	14.2
MAY	13	0.03	3.3	3.8	1.2	20.9
JUNE	4.0	0.00	1.1	1.4	1.3	6.9
JULY	0.73	0.00	0.26	0.27	1.1	1.6
AUGUST	1.3	0.00	0.34	0.49	1.4	2.2
SEPTEMBER	6.0	0.03	0.84	1.7	2.1	5.3
ANNUAL	3.7	0.11	1.3	1.2	0.93	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1968-76, 1988

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.04
90	0.00	0.00	0.00	0.00	0.03	0.08
120	0.00	0.00	0.00	0.00	0.07	0.15
183	0.23	0.11	0.07	0.05	0.03	0.02

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON YEARS OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-76, 1987, 1989

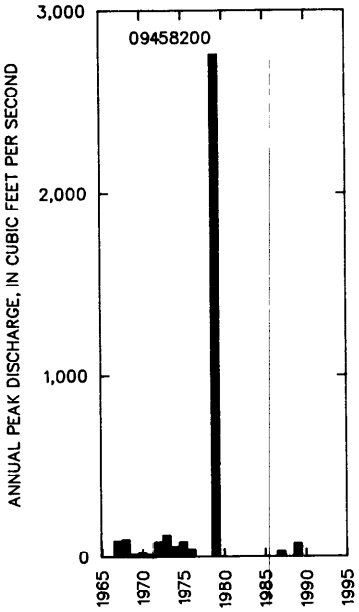
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	16	34	44	53	58	62
3	10	24	32	42	48	53
7	6.9	16	22	28	32	36
15	4.8	11	15	20	23	26
30	3.3	7.7	11	15	18	21
60	2.3	5.4	7.9	12	14	17
90	2.0	4.9	7.3	11	14	17

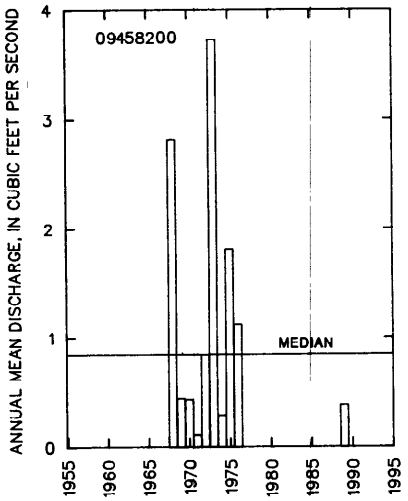
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-76, 1987, 1989

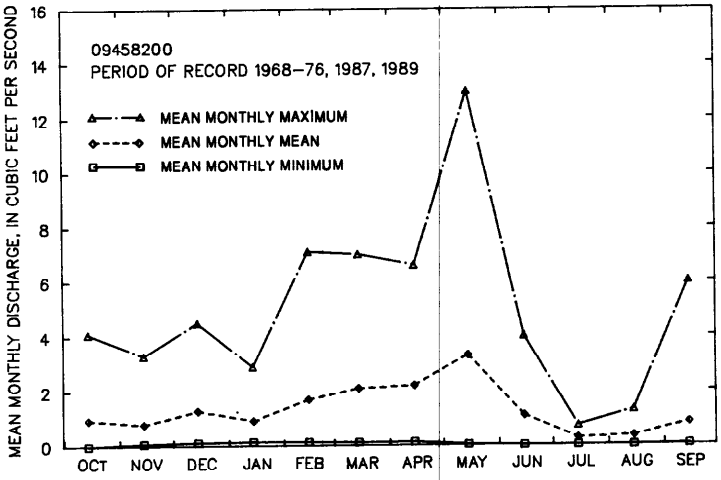
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
14	6.1	3.9	2.5	1.8	0.86	0.55	0.37	0.26	0.17	0.12	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09458200 DEADMAN CREEK NEAR SAFFORD, AZ--CONTINUED







09458500 GILA RIVER AT SAFFORD, AZ

LOCATION.--Lat 32°50'50", long 109°42'55", in SW¼SW¼ sec.5, T.7 S., R.26 E., Graham County, Hydrologic Unit 15040005, on downstream side of highway bridge 1 mi north of Safford and 4.5 mi downstream from San Simon River.

DRAINAGE AREA.--10,459 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1940	09-06-40	8,600	1952	01-19-52	15,700
1941	09-30-41	33,000	1953	07-07-53	2,670
1942	12-12-41	7,800	1957	08-31-57	10,300
1943	09-27-43	5,780	1958	09-13-58	9,660
1944	09-26-44	13,600	1959	08-28-59	6,810
1945	08-03-45	5,320	1960	01-12-60	15,400
1946	10-09-45	6,340	1961	08-22-61	6,990
1947	08-31-47	4,600	1962	09-27-62	16,200
1948	08-07-48	6,090	1963	10-19-62	7,460
1949	01-14-49	23,900	1964	07-15-64	7,330
1950	07-30-50	1,860	1965	08-29-65	4,900
1951	08-03-51	6,390			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
23.6	186	5,830	46.0	2.6	15.6	1.7	3.4

09458500 GILA RIVER AT SAFFORD, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-46, 1957-65

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,180	0.16	194	292	1.5	5.7
NOVEMBER	403	0.28	139	128	0.92	4.1
DECEMBER	1,400	1.3	288	423	1.5	8.4
JANUARY	2,040	74	445	574	1.3	13.0
FEBRUARY	2,170	27	458	640	1.4	13.4
MARCH	2,660	13	491	796	1.6	14.3
APRIL	1,680	4.7	337	533	1.6	9.8
MAY	1,560	0.13	154	393	2.6	4.5
JUNE	130	0.00	15	33	2.2	0.4
JULY	442	5.6	94	115	1.2	2.7
AUGUST	1,660	11	428	417	0.98	12.5
SEPTEMBER	1,180	16	380	332	0.87	11.1
ANNUAL	1,120	87	284	263	0.92	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-47, 1958-65

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.01	0.00	0.00	0.00	0.00	0.00
30	0.51	0.00	0.00	0.00	0.00	0.00
60	4.3	0.75	0.27	0.11	0.04	0.02
90	14	5.2	3.4	2.4	1.7	1.3
120	36	19	14	11	8.3	7.0
183	116	57	38	26	17	13

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-53, 1957-65

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
8,230	13,500	17,700	24,100	29,700	35,900

WEIGHTED SKEW (LOGS)= 0.33
MEAN (LOGS)= 3.93
STANDARD DEV. (LOGS)= 0.24

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-46, 1957-65

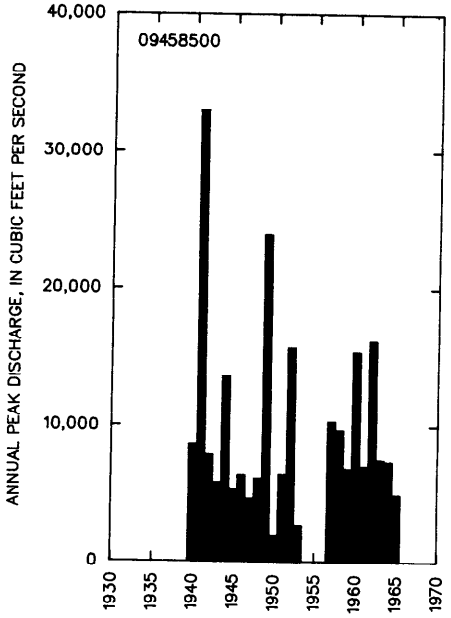
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	4,090	7,800	11,500	17,900	24,400	32,600
3	2,900	5,340	7,490	10,900	14,000	17,700
7	1,940	3,490	4,700	6,440	7,870	9,400
15	1,310	2,390	3,250	4,500	5,540	6,660
30	873	1,640	2,290	3,300	4,190	5,210
60	610	1,180	1,700	2,560	3,380	4,360
90	479	967	1,440	2,250	3,050	4,030

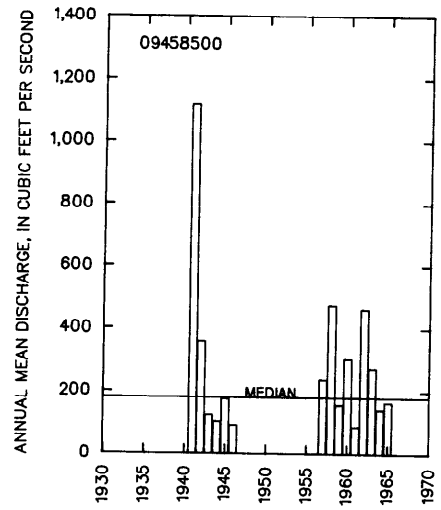
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-46, 1957-65

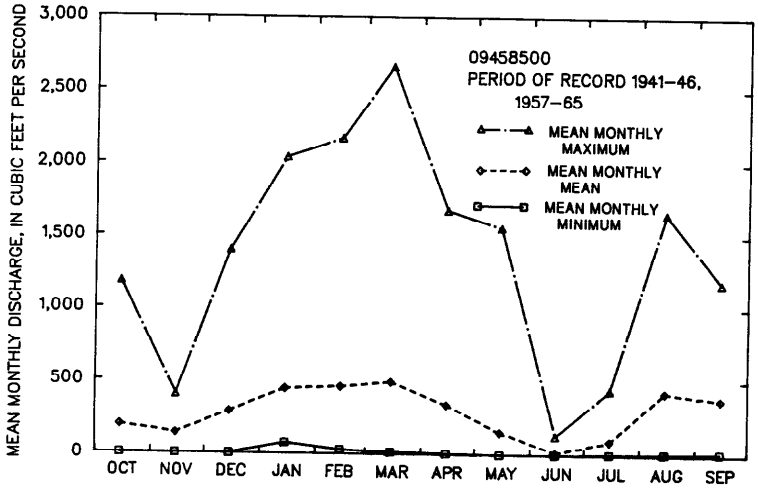
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,480	1,360	694	442	322	176	103	66	40	21	7.9	0.52	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09458500 GILA RIVER AT SAFFORD, AZ--CONTINUED







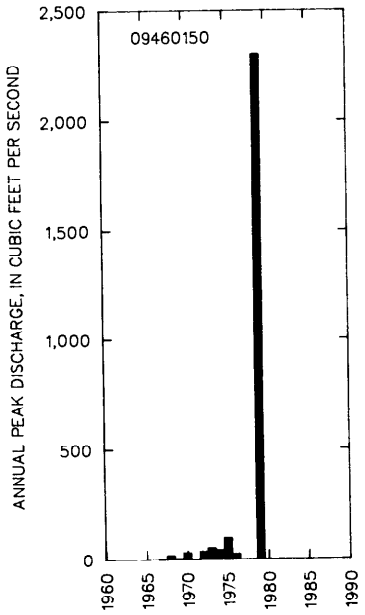
09460150 FRYE CREEK NEAR THATCHER, AZ

LOCATION.--Lat 32°44'32", long 109°50'24", in NE¼ sec.13, T.8 S., R.24 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in Coronado National Forest, on right bank and 9 mi southwest of Thatcher.

DRAINAGE AREA.--3.91 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	08-11-67	2.2	
1968	05-29-68	17	
1969	05-23-69	3.2	
1970	09-06-70	30	
1971	10-03-70	0.8	
1972	10-24-71	36	
1973	10-19-72	51	
1974	08-06-74	42	
1975	09-06-75	96	
1976	02-09-76	24	
1979	12-19-78	2,300	ES,HP



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ---
STANDARD DEV. (LOGS)= ---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
1,160.0	4.0	8,400	79.0	1.0	25.0	2.0	4.0

09466500 GILA RIVER AT CALVA, AZ
(National stream-quality accounting network station)

LOCATION.--Lat 33°11'08", long 110°13'10", in SW¼ sec.8, T.3 S., R.21 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on Southern Pacific Railroad bridge at head of San Carlos Reservoir, 2.0 mi west of Calva.

DRAINAGE AREA.--11,470 mi^2.

REMARKS.--Diversion above station for irrigation of about 69,000 acres, metallurgical treatment of ores, and municipal uses.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-20-16	[1]100,000	ES,HP	1960	01-14-60	9,090	
1930	07-29-30	9,600		1961	08-23-61	3,080	
1931	08-11-31	9,900		1962	09-29-62	9,000	
1932	02-12-32	21,500		1963	10-20-62	3,240	
1933	09-09-33	6,560		1964	09-26-64	3,060	
1934	08-28-34	18,000		1965	08-14-65	4,700	
1935	07-31-35	4,470		1966	12-24-65	39,000	
1936	09-11-36	6,000		1967	08-13-67	40,000	
1937	02-09-37	12,800		1968	12-21-67	8,960	
1938	03-05-38	4,310		1969	09-14-69	1,160	
1939	08-07-39	4,260		1970	03-03-70	982	
1940	10-09-39	5,620		1971	08-22-71	7,470	
1941	01-02-41	14,300		1972	10-28-71	7,160	
1942	10-01-41	27,900		1973	10-20-72	80,000	
1943	09-28-43	3,710		1974	07-20-74	1,160	
1944	09-27-44	12,800		1975	09-10-75	15,800	
1945	08-03-45	3,390		1976	02-12-76	2,600	
1946	10-10-45	4,680		1977	08-15-77	6,090	
1947	08-24-47	3,200		1978	03-04-78	19,000	
1948	08-07-48	2,570		1979	12-19-78	100,000	
1949	01-15-49	19,400		1980	02-16-80	20,600	
1950	07-30-50	3,210		1981	08-02-81	2,200	
1951	08-04-51	2,970		1982	09-12-82	2,020	
1952	01-20-52	13,200		1983	02-06-83	10,260	
1953	07-30-53	2,040		1984	10-03-83	[2]150,000	
1954	03-25-54	4,260		1985	12-29-84	53,700	
1955	08-04-55	4,950		1986	10-18-85	6,720	
1956	10-05-55	4,240		1987	11-04-86	2,150	
1957	09-01-57	4,220		1988	09-24-88	7,820	
1958	03-26-58	6,700		1989	10-16-88	903	
1959	08-26-59	3,920					

[1]Highest since 1906.
[2]Highest since 1907.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
20.4	225	5,650	44.0	2.6	15.5	1.7	3.5

09466500 GILA RIVER AT CALVA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1930-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	8,490	0.00	381	1,240	3.3	9.6
NOVEMBER	1,540	0.00	172	253	1.5	4.4
DECEMBER	5,650	0.00	413	921	2.2	10.5
JANUARY	3,580	22	475	741	1.6	12.0
FEBRUARY	3,550	29	633	867	1.4	16.0
MARCH	2,940	10	646	868	1.3	16.4
APRIL	2,330	1.3	355	534	1.5	9.0
MAY	2,080	1.3	179	368	2.1	4.5
JUNE	292	0.00	33	63	1.9	0.8
JULY	838	0.00	89	147	1.7	2.2
AUGUST	1,660	0.00	329	406	1.2	8.3
SEPTEMBER	1,680	0.00	243	331	1.4	6.2
ANNUAL	1,520	29	328	338	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1931-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	85	38	24	16	10	7.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1916, 1930-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,240	17,000	30,700	61,000	98,000	153,000

WEIGHTED SKEW (LOGS)= 0.64
MEAN (LOGS)= 3.85
STANDARD DEV. (LOGS)= 0.48

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1930-89

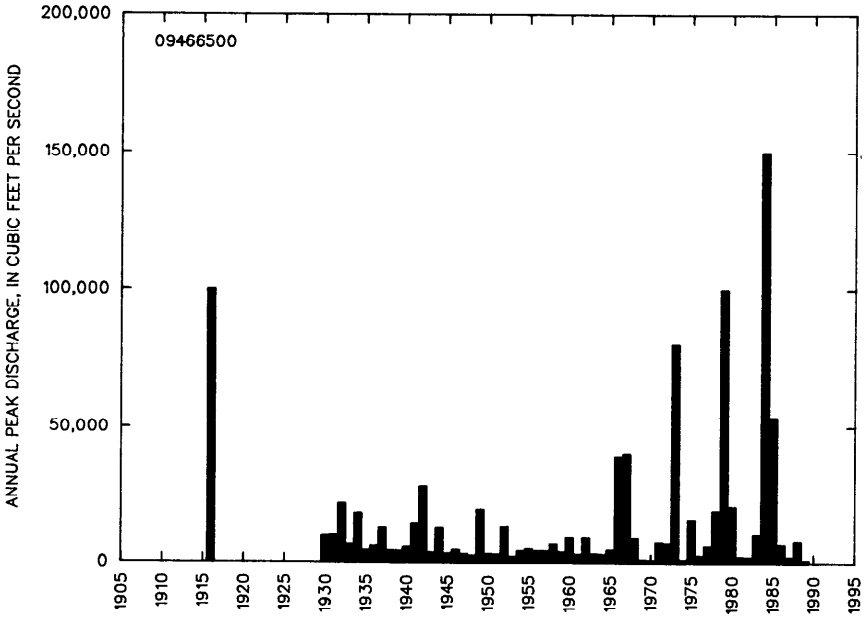
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,060	11,400	20,500	39,700	62,100	94,300
3	2,960	8,220	14,600	27,600	42,500	63,300
7	2,030	5,360	9,070	16,100	23,500	33,200
15	1,400	3,520	5,720	9,630	13,500	18,300
30	951	2,300	3,650	5,980	8,210	10,900
60	649	1,560	2,470	4,030	5,530	7,360
90	507	1,230	1,980	3,290	4,580	6,190

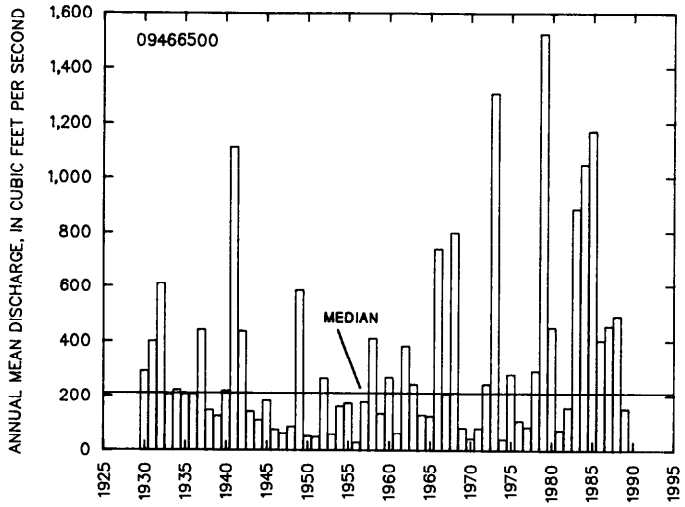
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-89

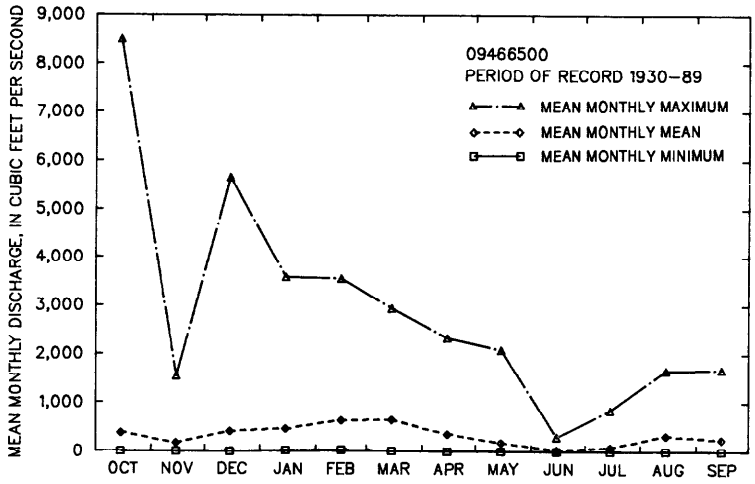
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,910	1,540	741	484	341	183	106	66	41	24	11	2.0	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09466500 GILA RIVER AT CALVA, AZ--CONTINUED







09467120 SALT CREEK NEAR PERIDOT, AZ

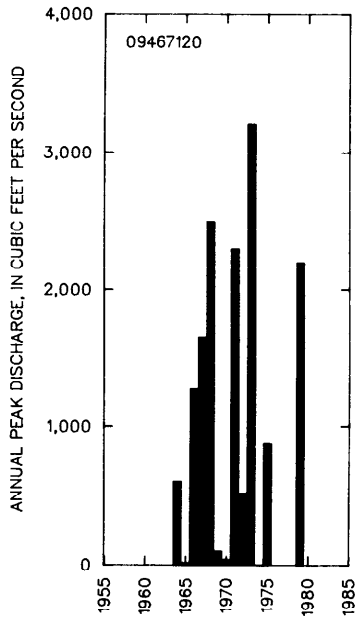
LOCATION.--Lat 33°16'15", long 110°18'15", Graham County, Hydrologic Unit 15040005, at U.S. Highway 70, 4 miles above mouth, and 9.5 miles southeast of Peridot.

DRAINAGE AREA.--35.2 mi^2, of which 4.9 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-13-64	604	
1965	01-03-65	17	ES
1966	12-22-65	1,270	
1967	08-06-67	1,650	
1968	12-20-67	2,500	
1969	00-00-69	100	LT
1970	09-06-70	40	ES
1971	09-30-71	2,300	
1972	10-00-71	517	
1973	10-19-72	3,200	
1974	00-00-74	0	
1975	07-20-75	880	
1979	12-18-78	[1]2,200	HP

[1]Highest since 1975.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
810	1,920	2,890	4,350	5,580	6,910

WEIGHTED SKEW (LOGS)= -0.40
MEAN (LOGS)= 2.88
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
169	14.4	3,490	2.3	1.0	16.0	1.9	3.9

GILA RIVER BASIN

09468300 SEVENMILE WASH TRIBUTARY NEAR GLOBE, AZ

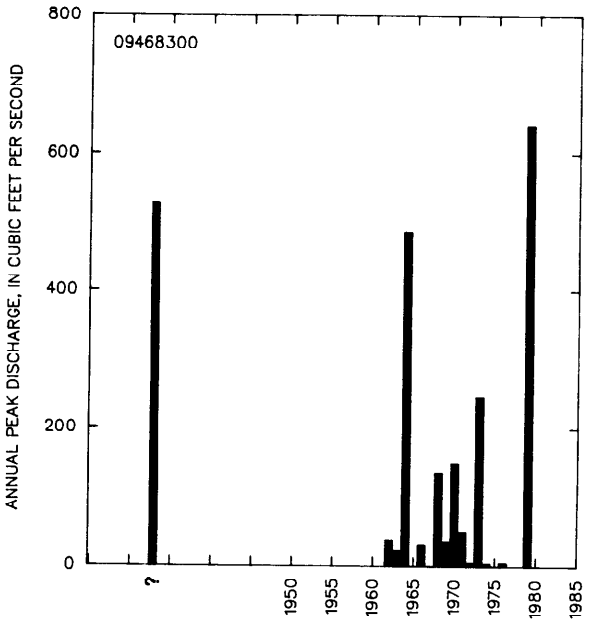
LOCATION.--Lat 33°35'10", long 110°39'00", Gila County, Hydrologic Unit 15040007, at U.S. Highway 60, 0.2 mi south of Sevenmile Wash, and 15 miles northeast of Globe.

DRAINAGE AREA.--0.83 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
----	--------	[1]526	HP
1962	00-00-62	38	
1963	08-17-63	22	
1964	07-31-64	486	
1965	00-00-65	0	
1966	12-10-65	30	
1967	00-00-67	0	
1968	08-04-68	135	
1969	08-27-69	35	
1970	08-00-70	150	
1971	00-00-71	50	LT
1972	10-17-71	5.0	ES
1973	10-19-72	245	
1974	07-19-74	4.0	
1975	09-08-75	0.1	ES
1976	00-00-76	5.0	ES
1979	12-18-78	[2]640	HP

[1]Highest since 1933, year of occurrence unknown.
[2]Highest since 1933.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1933, 1962-76, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
27.3	134	295	660	1,090	1,690

WEIGHTED SKEW (LOGS)= -0.26
MEAN (LOGS)= 1.40
STANDARD DEV. (LOGS)= 0.86

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
280	2.0	4,410	36.0	3.0	19.0	2.0	4.0

09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ

LOCATION.--Lat 33°17'47", long 110°27'03", in SE¼ sec.36, T.1 S., R.18 E. (unsurveyed), Gila County, Hydrologic Unit 15040007, in San Carlos Indian Reservation, on U.S. Highway 70 bridge, 0.9 mi south of Peridot.

DRAINAGE AREA.--1,026 mi^2.

REMARKS.--Diversions above station for irrigation of about 600 acres. Small inflow from sewage treatment system about 3.6 mi upstream. Flow regulated to some extent since June 15, 1979, by Talkalai Reservoir; capacity of reservoir is about 6,000 acre-ft.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-18-16	25,000	ES,HP	1960	12-26-59	14,300	
1930	03-17-30	5,700		1961	07-22-61	5,510	
1931	08-07-31	7,000		1962	09-26-62	4,400	
1932	02-10-32	12,000		1963	02-11-63	9,740	
1933	09-08-33	11,000		1964	07-25-64	6,610	
1934	08-18-34	8,200		1965	01-08-65	1,710	
1935	02-07-35	13,800		1966	12-22-65	36,300	
1936	02-17-36	14,400		1967	07-29-67	16,100	
1937	02-07-37	29,400		1968	12-20-67	32,000	
1938	03-04-38	8,640		1969	01-22-69	4,580	
1939	08-03-39	10,200		1970	09-06-70	5,080	
1940	08-03-40	6,000		1971	08-14-71	7,930	
1941	03-14-41	40,600		1972	10-17-71	4,970	
1942	12-12-41	2,520		1973	10-19-72	25,000	
1943	09-26-43	5,060		1974	07-20-74	7,800	
1944	09-27-44	795		1975	04-11-75	1,960	
1945	08-09-45	3,200		1976	09-25-76	12,000	
1946	07-27-46	4,530		1977	09-11-77	5,400	
1947	08-08-47	15,000		1978	03-02-78	18,600	
1948	08-02-48	2,850		1979	12-18-78	22,500	
1949	01-09-49	3,260		1980	02-15-80	12,300	
1950	07-21-50	2,150		1981	09-22-81	565	
1951	08-29-51	2,940		1982	02-11-82	6,260	
1952	01-13-52	39,200		1983	03-25-83	6,260	
1953	08-27-53	860		1984	10-01-83	10,300	
1954	03-23-54	23,500		1985	12-27-84	4,470	
1955	08-06-55	14,600		1986	07-16-86	3,240	
1956	01-29-56	9,300		1987	12-07-86	4,130	
1957	07-26-57	7,310		1988	08-27-88	3,400	
1958	03-22-58	7,670		1989	08-03-89	3,160	
1959	08-18-59	2,280					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
29.4	56.7	4,480	10	2.0	17.2	2.1	4.0

09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1930-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	519	0.20	32	88	2.8	4.8
NOVEMBER	178	2.7	19	27	1.4	2.8
DECEMBER	1,580	5.1	108	254	2.3	16.3
JANUARY	870	5.8	91	153	1.7	13.6
FEBRUARY	1,500	7.0	154	254	1.7	23.1
MARCH	1,260	4.8	136	246	1.8	20.4
APRIL	170	2.2	22	31	1.4	3.3
MAY	42	0.03	7.1	7.3	1.0	1.1
JUNE	18	0.00	3.0	3.7	1.3	0.4
JULY	85	0.00	18	19	1.0	2.7
AUGUST	294	1.6	52	57	1.1	7.7
SEPTEMBER	166	0.00	24	30	1.3	3.6
ANNUAL	278	8.2	55	55	0.99	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1931-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	3.3	1.5	0.91	0.59	0.36	0.25
120	6.6	3.4	2.3	1.6	1.0	0.77
183	12	6.3	4.5	3.3	2.3	1.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1930-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
7,130	14,600	21,400	32,400	42,600	54,500

WEIGHTED SKEW (LOGS)= 0.11
MEAN (LOGS)= 3.86
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1930-89

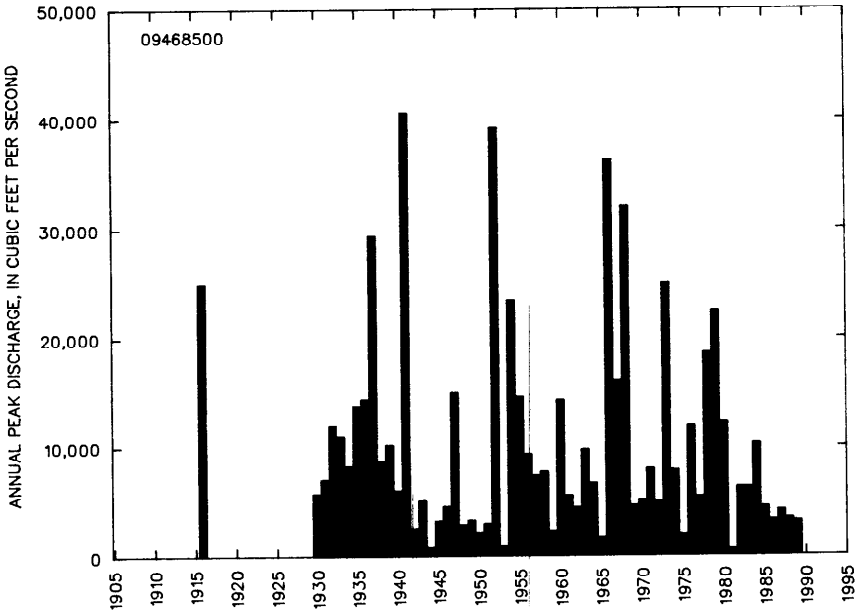
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,740	4,810	8,320	15,100	22,300	31,900
3	968	2,750	4,860	9,060	13,700	19,900
7	543	1,490	2,580	4,700	6,980	10,000
15	319	832	1,400	2,470	3,580	5,040
30	196	496	821	1,430	2,070	2,890
60	126	315	520	901	1,300	1,810
90	93	236	391	680	983	1,380

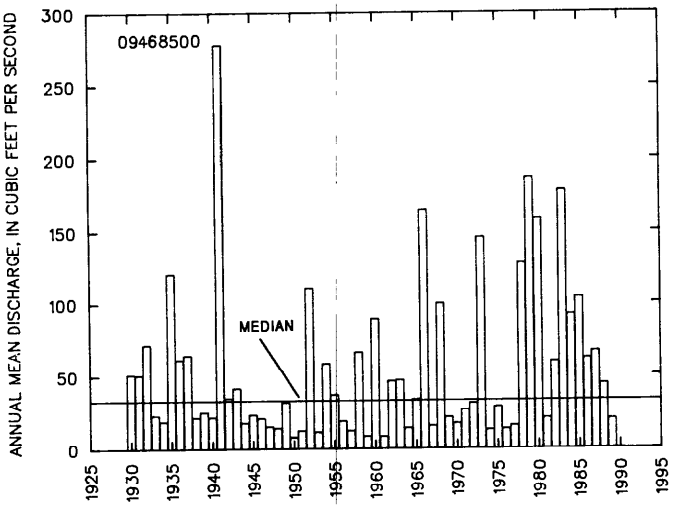
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-89

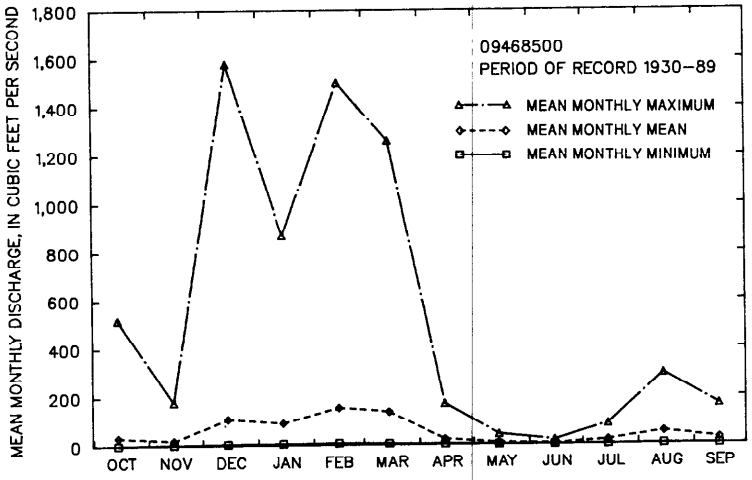
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
937	147	64	38	26	16	12	9.2	6.9	4.9	3.0	0.93	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ--CONTINUED







09470500 SAN PEDRO RIVER AT PALOMINAS, AZ

LOCATION.--Lat 31°22'48", long 110°06'38", in SW¼SE¼ sec.33, T.23 S., R.22 E., Cochise County, Hydrologic Unit 15050202, near left bank on downstream side of pier of bridge on State Highway 92, 0.7 mi east of Palominas, 2.5 mi upstream from Green Brush Draw, 4.5 mi downstream from international boundary, and 12 mi southwest of Bisbee.

DRAINAGE AREA.--737 mi^2, of which 649 mi^2 is in Mexico.

REMARKS.--Small diversions for irrigation of a few hundred acres above station, mostly in Mexico. Records show approximate flow of river at international boundary.

Records furnished by International Boundary and Water Commission 1982-89.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1926	09-28-26	([1])	HP	1964	08-14-64	11,000	
1930	08-07-30	9,400		1965	07-28-65	4,530	
1931	08-08-31	8,900		1966	07-28-66	3,610	
1932	08-09-32	6,000		1967	07-26-67	5,560	
1933	09-19-33	4,700		1968	12-20-67	6,500	
1935	08-14-35	3,000		1969	07-28-69	4,000	ES
1936	09-10-36	13,500		1970	08-09-70	5,870	
1937	08-20-37	8,090		1971	08-11-71	6,380	
1938	08-07-38	6,300		1972	08-26-72	1,830	
1939	08-06-39	7,500		1973	10-18-72	2,900	
1940	08-14-40	[2]22,000		1974	07-30-74	7,360	
1941	01-28-41	5,900		1975	09-14-75	6,840	
1950	07-05-50	6,270		1976	07-27-76	5,000	
1951	07-02-51	5,710		1977	07-31-77	3,310	
1952	08-16-52	7,400		1978	10-09-77	14,500	
1953	07-07-53	11,900		1979	01-18-79	12,000	
1954	08-14-54	6,510		1980	08-04-80	2,000	
1955	07-31-55	6,250		1981	07-10-81	3,360	
1956	07-17-56	4,640		1982	09-10-82	4,260	
1957	08-20-57	2,540		1983	02-04-83	1,940	
1958	08-05-58	16,500		1984	10-02-83	8,180	
1959	07-27-59	13,000		1985	12-28-84	10,600	
1960	08-16-60	3,410		1986	08-18-86	4,000	
1961	07-29-61	3,820		1987	08-10-87	978	
1962	07-26-62	4,130		1988	09-11-88	7,020	
1963	07-27-63	6,340		1989	08-04-89	1,550	

[1]Highest since 1906; discharge unknown.
[2]Highest since 1927.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
23.5	35.4	4,950	12.0	2.3	17.9	1.9	4.0

09470500 SAN PEDRO RIVER AT PALOMINAS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1931-33, 1936-40, 1951-81

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	770	0.00	26	123	4.7	6.8
NOVEMBER	43	0.00	5.0	7.8	1.5	1.3
DECEMBER	414	0.10	22	71	3.2	5.9
JANUARY	452	0.04	22	74	3.4	5.7
FEBRUARY	74	0.07	11	16	1.5	2.9
MARCH	76	0.22	8.3	14	1.8	2.2
APRIL	15	0.00	2.7	3.1	1.2	0.7
MAY	7.0	0.00	1.2	1.5	1.2	0.3
JUNE	23	0.00	4.0	6.4	1.6	1.0
JULY	280	3.0	89	71	0.80	23.4
AUGUST	591	2.7	154	167	1.1	40.3
SEPTEMBER	275	0.19	36	53	1.5	9.4
ANNUAL	93	7.1	32	22	0.69	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-33, 1937-41, 1952-81

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.02	0.00	0.00	0.00	0.00	0.00
30	0.09	0.00	0.00	0.00	0.00	0.00
60	0.25	0.05	0.00	0.00	0.00	0.00
90	0.55	0.12	0.05	0.03	0.01	0.01
120	2.4	0.69	0.32	0.16	0.07	0.04
183	3.9	1.1	0.54	0.30	0.15	0.09

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1926, 1930-33, 1935-41, 1950-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,810	9,190	11,800	15,400	18,300	21,500

WEIGHTED SKEW (LOGS)= 0.12
MEAN (LOGS)= 3.77
STANDARD DEV. (LOGS)= 0.23

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-33, 1936-40, 1951-81

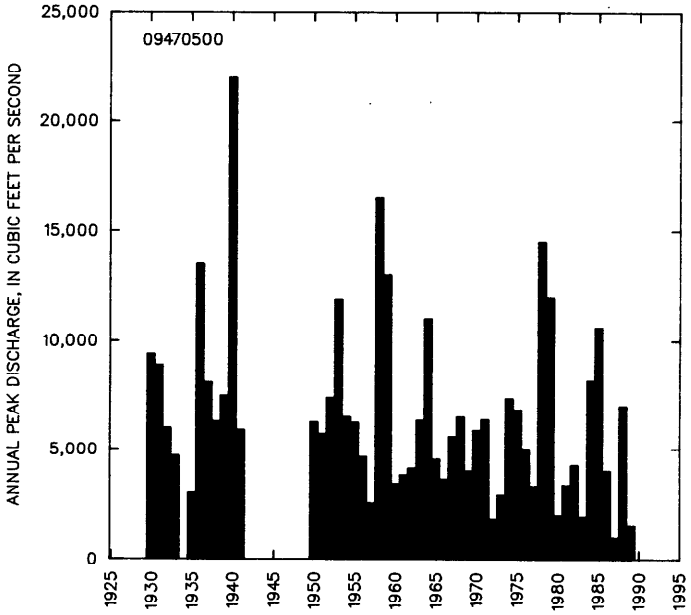
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,560	3,190	4,750	7,380	9,920	13,000
3	818	1,670	2,510	3,990	5,460	7,320
7	473	954	1,400	2,130	2,810	3,630
15	303	596	854	1,260	1,620	2,050
30	198	379	533	767	972	1,200
60	127	237	327	457	567	686
90	90	166	227	313	383	459

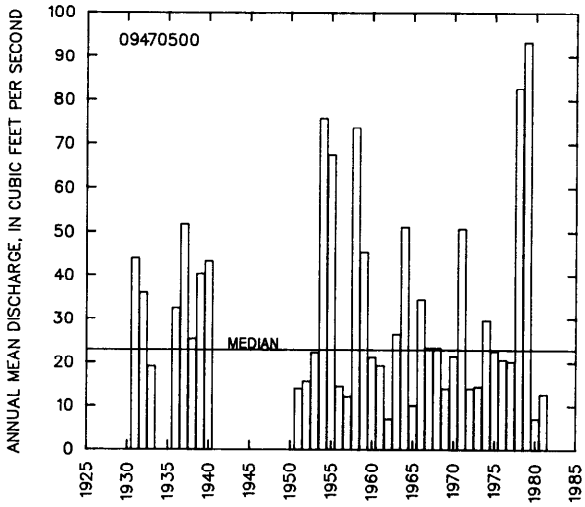
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-33, 1936-40, 1951-81

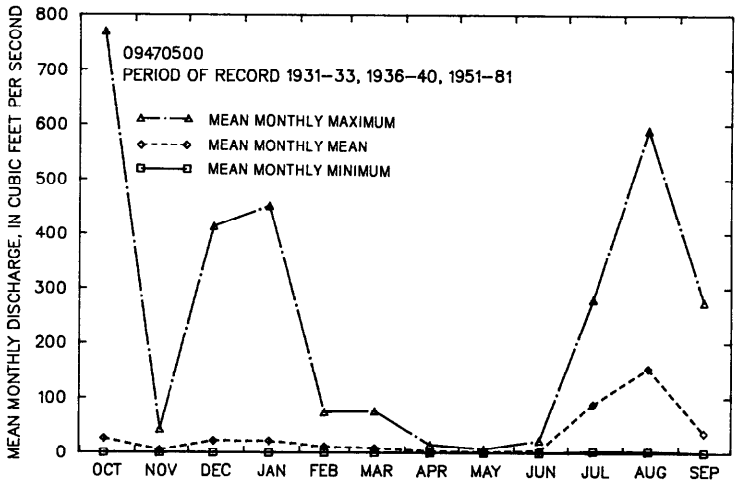
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
634	111	35	18	11	6.6	4.3	2.7	1.4	0.53	0.21	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09470500 SAN PEDRO RIVER AT PALOMINAS, AZ--CONTINUED







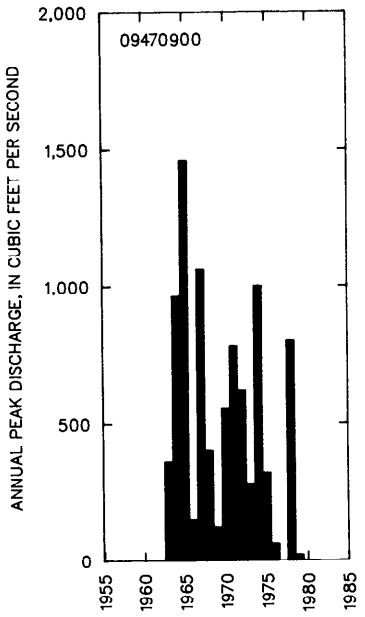
09470900 SAN PEDRO RIVER TRIBUTARY NEAR BISBEE, AZ

LOCATION.--Lat 31°34'12", long 110°01'36", in SW¼SE¼ sec.29, T.21 S., R.23 E., Cochise County, Hydrologic Unit 15050202, at U.S. Highway 80, 11 miles northwest of Bisbee.

DRAINAGE AREA.--7.12 mi^2, of which 1.87 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-20-63	360	
1964	08-10-64	962	
1965	09-04-65	1,460	
1966	00-00-66	150	LT
1967	08-12-67	1,060	
1968	07-00-68	400	
1969	08-30-69	120	
1970	07-28-70	556	
1971	07-23-71	780	
1972	08-26-72	620	
1973	07-00-73	280	
1974	00-00-74	1,000	
1975	07-24-75	320	
1976	00-00-76	60	
1978	10-07-77	800	
1979	00-00-79	20	LT



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1978-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
498	885	1,170	1,550	1.840	2,140

WEIGHTED SKEW (LOGS)= -0.34
MEAN (LOGS)= 2.68
STANDARD DEV. (LOGS)= 0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
129	3.9	4,770	2.2	1.0	16.0	1.9	4.1

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ

LOCATION.--Lat 31°37'33", long 110°10'26", in NE¼NE¼ sec.11, T.21 S., R.21 E., Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, at downstream side of pier near center of highway bridge, 0.3 mi south of Charleston, 1.5 mi upstream from Charleston damsite, and 9 mi upstream from Babocomari River.

DRAINAGE AREA.--1,234 mi^2, of which 696 mi^2 is in Mexico.

REMARKS.-- Diversions above station, mostly by pumping from ground water, for irrigation of 3,200 acres in 1978, excluding an unknown amount in Mexico. Record shows flow available at Charleston damsite.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	08-16-16	7,700		1953	07-07-53	8,590	
1917	08-12-17	13,000		1954	08-15-54	23,600	
1918	07-01-18	4,000	ES	1955	08-06-55	14,400	
1919	08-16-19	25,100		1956	07-18-56	6,550	
1920	09-05-20	4,500		1957	07-25-57	6,000	
1921	07-19-21	19,000		1958	08-05-58	8,400	
1922	09-09-22	3,720		1959	07-27-59	7,480	
1923	08-12-23	5,200		1960	08-11-60	3,900	
1924	07-24-24	1,900		1961	07-30-61	3,620	
1925	08-06-25	11,900		1962	07-28-62	3,580	
1926	09-28-26	[1]98,000		1963	07-27-63	6,460	
1927	10-09-26	5,100	ES	1964	08-14-64	7,690	
1928	07-15-28	3,800		1965	09-04-65	4,180	
1929	07-29-29	10,400		1966	08-03-66	4,400	
1930	08-07-30	9,740		1967	07-26-67	6,010	
1931	08-09-31	24,500		1968	12-20-67	5,050	
1932	08-09-32	7,000		1969	07-28-69	3,920	
1933	07-22-33	9,600		1970	08-09-70	4,600	
1934	00-00-34	5,000	ES	1971	08-10-71	5,920	
1935	08-28-35	8,600		1972	08-26-72	5,950	
1936	09-11-36	13,000		1973	07-15-73	3,340	
1937	08-20-37	9,430		1974	07-20-74	13,100	
1938	08-07-38	7,450		1975	09-14-75	4,020	
1939	08-07-39	9,370		1976	09-05-76	3,620	
1940	08-13-40	31,000		1977	08-23-77	5,200	
1941	08-16-41	10,800		1978	10-09-77	23,700	
1942	07-24-42	2,870		1979	01-18-79	11,800	
1943	08-09-43	8,650		1980	08-15-80	990	
1944	08-18-44	3,430		1981	09-03-81	3,210	
1945	08-09-45	7,670		1982	09-10-82	8,800	
1946	08-04-46	12,000		1983	09-12-83	3,100	
1947	08-09-47	10,100		1984	10-03-83	8,560	
1948	08-03-48	7,850		1985	12-28-84	13,000	
1949	07-24-49	6,720		1986	08-18-86	5,020	
1950	07-06-50	6,070		1987	08-04-87	3,290	
1951	07-02-51	5,730		1988	09-12-88	3,640	
1952	08-17-52	7,850		1989	08-04-89	1,680	

[1]Highest since 1906.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
18.4	56.2	4,840	12.0	2.0	16.5	1.90	3.8

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1905, 1913-26, 1929-33, 1936-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,090	2.9	40	133	3.3	5.7
NOVEMBER	128	5.0	18	17	0.93	2.5
DECEMBER	1,230	6.0	50	153	3.1	7.1
JANUARY	507	9.5	38	68	1.8	5.4
FEBRUARY	217	7.2	28	31	1.1	3.9
MARCH	160	8.1	24	28	1.2	3.4
APRIL	67	3.0	13	9.4	0.70	1.9
MAY	37	2.4	8.6	5.5	0.64	1.2
JUNE	167	1.3	13	23	1.8	1.9
JULY	876	3.1	148	153	1.0	21.1
AUGUST	968	10	233	228	0.98	33.1
SEPTEMBER	1,890	4.1	91	221	2.4	12.9
ANNUAL	206	13	59	38	0.63	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914-26, 1930-33, 1937-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.0	1.2	0.88	0.69	0.52	0.42
3	2.1	1.3	0.97	0.77	0.58	0.48
7	2.3	1.5	1.1	0.90	0.69	0.58
14	2.6	1.7	1.3	1.1	0.88	0.76
30	3.4	2.3	1.8	1.5	1.2	1.0
60	4.9	3.4	2.9	2.5	2.1	1.9
90	6.9	5.0	4.2	3.7	3.2	2.9
120	13	9.0	7.6	6.6	5.8	5.3
183	16	11	9.1	8.1	7.4	7.1

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
6,600	11,900	16,900	25,500	33,800	44,000

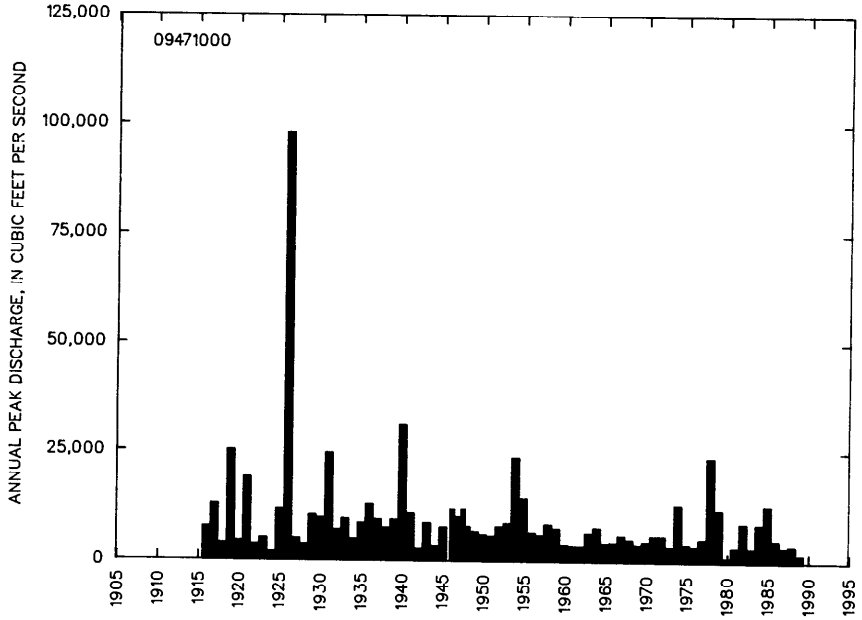
WEIGHTED SKEW (LOGS)= 0.65
MEAN (LOGS)= 3.85
STANDARD DEV. (LOGS)= 0.28

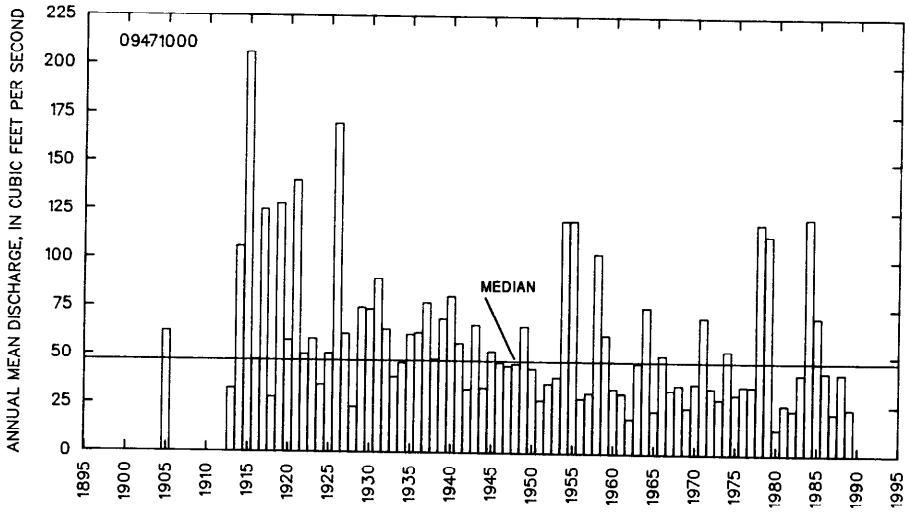
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1905, 1913-26, 1929-33, 1936-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,960	4,100	6,230	9,950	13,600	18,300
3	1,080	2,270	3,510	5,760	8,100	11,200
7	643	1,340	2,040	3,270	4,500	6,050
15	423	860	1,280	2,010	2,730	3,620
30	289	564	815	1,220	1,600	2,040
60	196	364	505	717	900	1,110
90	144	263	360	502	623	755

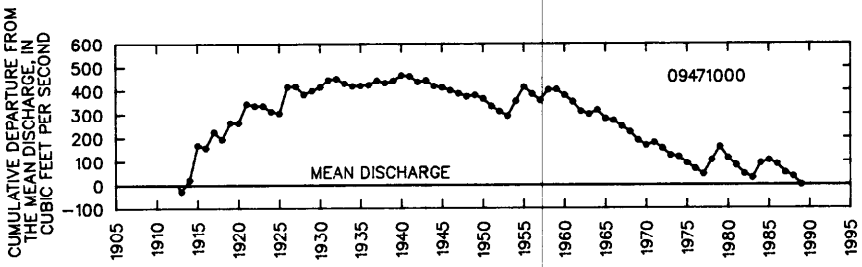
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1905, 1913-26, 1929-33, 1936-89

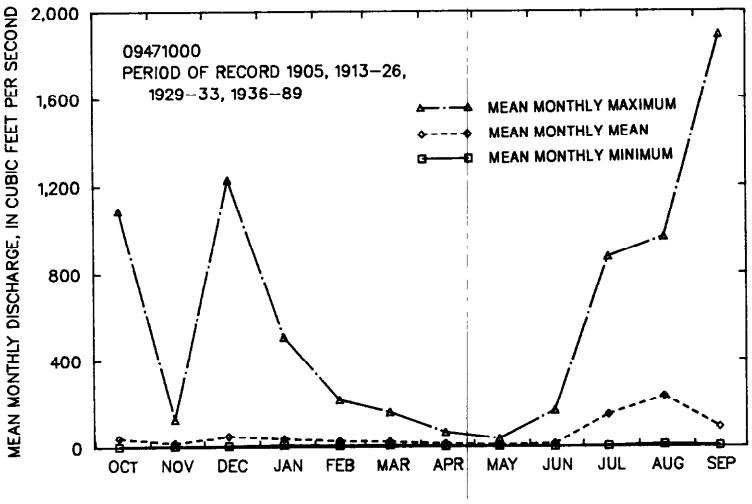
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
947	190	77	45	32	22	17	14	12	9.5	6.6	3.9	2.7	1.9	1.6	1.2	0.83


09471000
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
125,000
100,000
75,000
50,000
25,000
0
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995


09471000
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
MEDIAN
225
200
175
150
125
100
75
50
25
0
1895
1900
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--CONTINUED





GILA RIVER BASIN

09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ

LOCATION.--Lat 31°45'03", long 110°12'02", in SE¼ sec.28, T.19 S., R.21 E. (unsurveyed), Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, on right bank 0.5 mi downstream from Willow Wash, 2.6 mi north of Fairbank, and 8 mi northwest of Tombstone.

DRAINAGE AREA.--1,730 mi^2 approximately, of which 696 mi^2 is in Mexico.

REMARKS.--Diversions above station, mostly by pumping from ground water, for irrigation of 3,200 acres in 1978, excluding an unknown amount in Mexico.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1967	07-26-67	7,790
1968	12-20-67	7,340
1969	07-28-69	2,950
1970	08-03-70	5,400
1971	08-10-71	9,220
1972	08-12-72	12,900
1973	08-21-73	1,880
1974	07-20-74	18,500
1975	09-14-75	4,500
1976	07-27-76	8,580
1977	08-23-77	8,900
1978	10-09-77	24,200
1979	01-18-79	10,200
1980	08-15-80	1,400
1981	08-01-81	5,640
1982	09-10-82	6,500
1983	09-10-83	4,720
1984	10-02-83	13,600
1985	12-28-84	10,500
1986	08-18-86	4,410

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
18.0	67.4	4,820	13.0	2.0	16.2	1.9	3.8

09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-86

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	998	0.00	95	247	2.6	14.4
NOVEMBER	61	2.8	16	14	0.88	2.4
DECEMBER	375	6.4	63	112	1.8	9.6
JANUARY	450	9.7	56	105	1.9	8.5
FEBRUARY	214	9.1	45	53	1.2	6.7
MARCH	179	9.1	37	42	1.1	5.7
APRIL	44	4.2	15	9.4	0.63	2.3
MAY	21	1.7	7.9	4.9	0.62	1.2
JUNE	22	0.00	3.8	5.8	1.5	0.6
JULY	369	1.8	104	102	0.98	15.8
AUGUST	820	15	160	188	1.2	24.1
SEPTEMBER	177	0.09	58	56	0.96	8.8
ANNUAL	157	13	56	36	0.64	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-86

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.10	0.00	0.00	0.00	0.00	0.00
60	2.0	0.89	0.50	0.00	0.00	0.00
90	5.1	2.7	1.7	1.1	0.66	0.45
120	10	5.9	4.5	3.6	2.8	2.4
183	16	8.5	6.4	5.1	4.1	3.7

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1967-86

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
7,490	12,000	15,400	20,100	23,900	28,000

WEIGHTED SKEW (LOGS)= 0.08
MEAN (LOGS)= 3.88
STANDARD DEV. (LOGS)= 0.24

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-86

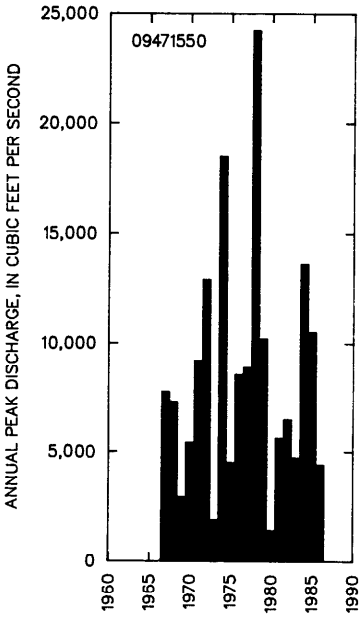
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,840	4,060	6,440	10,900	15,600	21,900
3	1,120	2,370	3,670	6,030	8,470	11,600
7	654	1,320	1,940	2,950	3,890	5,020
15	431	816	1,130	1,590	1,980	2,410
30	285	501	666	896	1,080	1,280
60	198	332	420	527	602	674
90	145	237	294	358	402	441

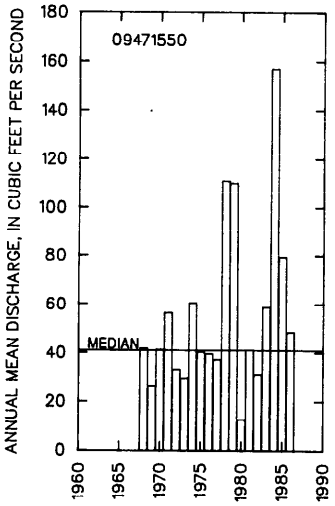
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-86

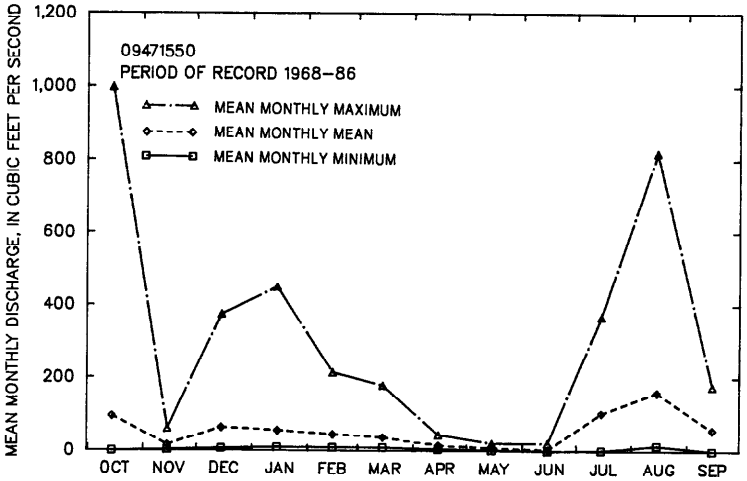
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
898	182	82	49	36	23	17	13	10	6.9	3.7	0.03	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ--CONTINUED







09471600 CANARY WASH NEAR BENSON, AZ

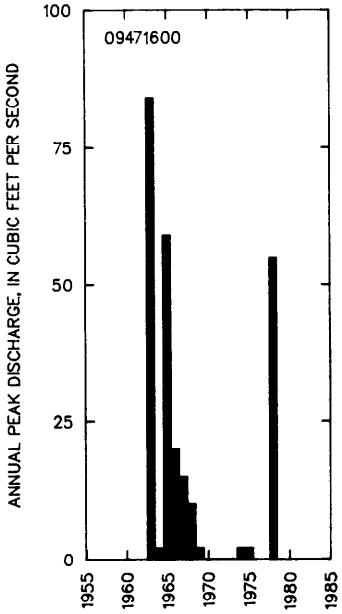
LOCATION.--Lat 31°52'35", long 110°20'30", in NW¼ sec.18, T.18 S., R.20 E., Cochise County, Hydrologic Unit 15050202, at State Highway 90, 6.5 miles southwest of Benson.

DRAINAGE AREA.--0.79 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	84	
1964	00-00-64	2.0	ES
1965	08-13-65	59	
1966	08-00-66	20	ES
1967	07-00-67	15	ES
1968	00-00-68	10	LT
1969	09-06-69	2.0	ES
1970	00-00-70	0	
1971	00-00-71	0	
1972	00-00-72	0	
1973	00-00-73	0	
1974	07-19-74	2.0	ES
1975	10-00-74	2.0	ES
1978	00-00-78	[1]55	HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75, 1978

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
4.4	24.7	58	139	239	385

WEIGHTED SKEW (LOGS)=	-0.26
MEAN (LOGS)=	0.60
STANDARD DEV. (LOGS)=	0.93

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
472	2.6	5,240	66.0	3.0	15.0	1.7	3.9

GILA RIVER BASIN

09471700 FENNER WASH NEAR BENSON, AZ

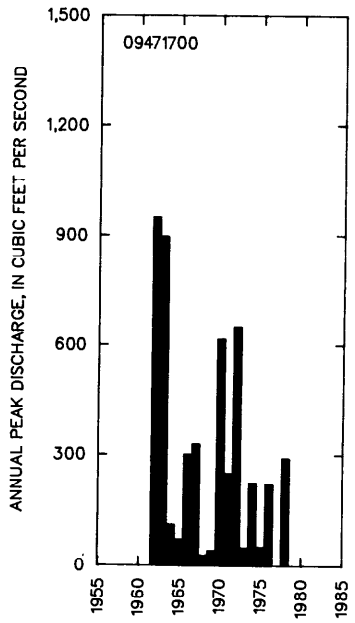
LOCATION.--Lat 31°58'49", long 110°12'57", in SE¼SE¼ sec.5, T.17 S., R.21 E., Cochise County, Hydrologic Unit 15050202, at Interstate 10, 4.3 miles east of Benson.

DRAINAGE AREA.--2.71 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	[1]950	
1963	07-30-63	896	
1964	00-00-64	110	ES
1965	10-17-64	70	ES
1966	08-00-66	300	ES
1967	09-24-67	330	
1968	10-03-67	27	
1969	08-30-69	40	
1970	07-00-70	615	
1971	08-03-71	250	
1972	09-07-72	649	
1973	00-00-73	48	
1974	07-19-74	225	
1975	07-22-75	50	
1976	00-00-76	220	
1978	00-00-78	[2]290	HP

[1]Highest since 1958.
[2]Highest since 1972.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF OF RECORD 1962-76, 1978

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
196	501	798	1,290	1,740	2,270

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 2.27
STANDARD DEV. (LOGS)= 0.50

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
93.8	5.4	4,180	0.0	1.0	12.3	1.7	4.3

09471800 SAN PEDRO RIVER NEAR BENSON, AZ

LOCATION.--Lat 32°07'35", long 110°17'22", in SW¼ sec.15, T.15 S., R.20 E., Cochise County, Hydrologic Unit 15050203, on right bank, 6 mi downstream from Tres Alamo Wash, and 11 mi north of Benson.

DRAINAGE AREA.--2,490 mi^2 of which 696 mi^2 is in Mexico.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	08-06-66	5,470
1967	07-26-67	4,560
1968	08-10-68	5,900
1969	07-28-69	2,640
1970	07-20-70	8,200
1971	08-11-71	7,390
1972	08-26-72	9,800
1973	07-16-73	2,140
1974	07-20-74	9,520
1975	07-23-75	8,920
1976	07-28-76	5,110

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
17.3	84.0	4,800	12.0	1.9	15.6	1.9	4.4

09471800 SAN PEDRO RIVER NEAR BENSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1967-76

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	71	0.00	8.6	22	2.6	2.3
NOVEMBER	23	0.00	2.3	7.2	3.2	0.6
DECEMBER	196	0.00	20	62	3.1	5.4
JANUARY	28	0.00	2.8	8.9	3.1	0.8
FEBRUARY	47	0.00	8.2	18	2.1	2.2
MARCH	46	0.00	8.1	17	2.1	2.1
APRIL	0.01	0.00	0.00	0.00	3.2	0.0
MAY	0.08	0.00	0.01	0.03	2.3	0.0
JUNE	34	0.00	4.6	11	2.3	1.2
JULY	260	11	124	85	0.68	32.8
AUGUST	555	2.0	165	177	1.1	43.6
SEPTEMBER	81	0.00	34	25	0.74	9.0
ANNUAL	61	15	32	14	0.43	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-76

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.20	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-76

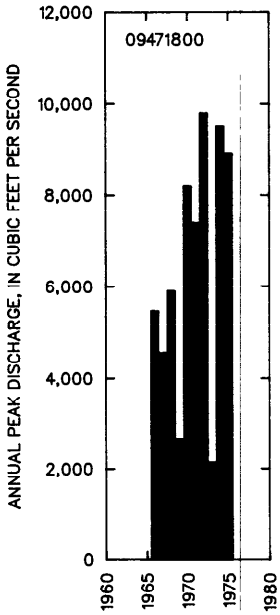
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	1,970	2,910	3,440	4,030	4,400	4,730
3	1,100	1,620	1,930	2,260	2,470	2,660
7	608	915	1,100	1,330	1,480	1,620
15	392	619	774	974	1,120	1,270
30	251	414	532	688	810	934
60	153	243	302	374	427	477
90	110	170	207	250	279	306

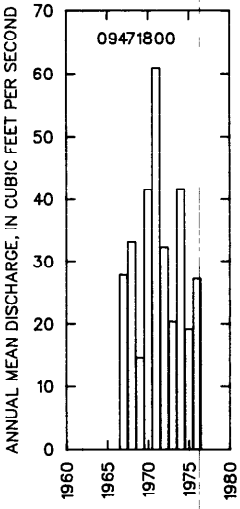
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-76

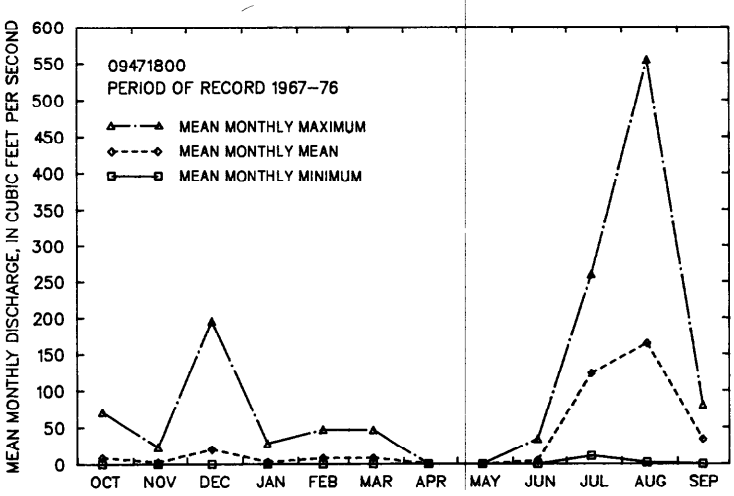
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
777	125	41	16	2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09471800 SAN PEDRO RIVER NEAR BENSON, AZ--CONTINUED







GILA RIVER BASIN

09472000 SAN PEDRO RIVER NEAR REDINGTON, AZ

LOCATION.--Lat 32°22'50", long 110°26'45", in NE¼NW¼ sec.19, T.12 S., R.19 E., Cochise County, Hydrologic Unit 15050203, on left bank, 0.3 mi upstream from Cochise-Pima County line, 4.3 mi southeast of Redington, and 30 mi north of Benson.

DRAINAGE AREA.--2,927 mi^2, of which 696 mi^2 is in Mexico.

REMARKS.--Diversions above station for irrigation of about 10,800 acres in 1978, excluding an unknown amount in Mexico. Diversion above gage into formerly used ditch on right bank was placed in operation in January 1972.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1926	09-28-26	[1]90,000	ES,HP	1961	07-30-61	3,800	
1931	08-10-31	18,000	ES	1962	07-28-62	2,050	
1932	10-02-31	19,400	ES	1963	08-26-63	5,530	
1933	07-23-33	13,500	ES	1964	08-15-64	6,070	
1934	08-04-34	7,400	ES	1965	08-14-65	2,140	
1935	08-24-35	16,300	ES	1966	07-29-66	5,890	
1936	09-11-36	10,400	ES	1967	09-25-67	7,800	
1937	08-30-37	14,100	ES	1968	12-20-67	5,000	
1938	08-05-38	7,800	ES	1969	08-07-69	2,480	
1939	08-02-39	9,920	ES	1970	07-21-70	8,490	
1940	08-14-40	50,000	ES	1971	08-11-71	8,600	
1941	01-29-41	10,100	ES	1972	08-27-72	11,400	
1943	08-09-43	7,090		1973	10-19-72	1,680	
1944	09-24-44	19,000		1974	07-20-74	12,100	
1945	08-10-45	14,600		1975	07-23-75	8,030	
1946	08-04-46	9,000		1976	07-28-76	6,550	
1947	08-08-47	23,000		1977	08-24-77	1,980	
1948	09-26-48	11,500	ES	1978	10-10-77	23,000	
1949	00-00-49	10,000	ES	1979	01-18-79	10,800	
1950	07-30-50	8,800		1980	08-14-80	392	
1951	08-02-51	28,600		1981	07-29-81	3,460	
1952	08-16-52	4,470		1982	09-11-82	7,190	
1953	07-07-53	7,290		1983	09-28-83	6,880	
1954	08-01-54	18,500		1984	10-02-83	25,400	
1955	08-07-55	18,800		1985	12-29-84	7,000	
1956	07-30-56	3,160		1986	08-18-86	2,140	
1957	08-18-57	9,300		1987	08-22-87	410	
1958	08-17-58	10,800		1988	09-12-88	1,020	
1959	07-27-59	8,580		1989	10-20-88	2,210	
1960	09-05-60	1,980					

[1]Highest since 1906.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
15.3	124	4,660	13.0	1.8	15.5	1.9	3.7

09472000 SAN PEDRO RIVER NEAR REDINGTON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1944-46, 1951-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	939	0.00	51	186	3.7	9.4
NOVEMBER	41	0.00	3.7	8.7	2.3	0.7
DECEMBER	532	0.00	36	106	3.0	6.7
JANUARY	749	0.00	33	120	3.6	6.2
FEBRUARY	223	0.00	22	50	2.2	4.2
MARCH	193	0.00	16	36	2.2	3.1
APRIL	59	0.00	4.0	10	2.6	0.7
MAY	19	0.00	1.4	4.0	2.8	0.3
JUNE	26	0.00	1.8	4.7	2.6	0.3
JULY	621	0.47	103	119	1.2	19.1
AUGUST	1,480	0.37	215	292	1.4	40.0
SEPTEMBER	367	0.17	50	74	1.5	9.4
ANNUAL	179	3.1	45	42	0.92	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1945-47, 1952-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	3.6	0.84	0.37	0.19	0.08	0.05

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1926, 1931-41, 1943-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
7,800	16,100	23,100	33,800	43,000	53,200

WEIGHTED SKEW (LOGS)= -0.16
MEAN (LOGS)= 3.88
STANDARD DEV. (LOGS)= 0.38

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1944-46, 1951-89

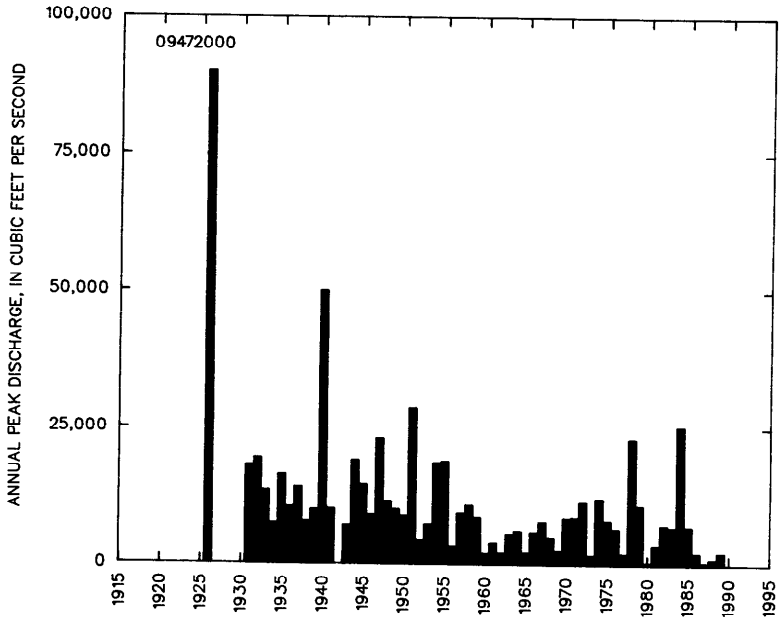
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,940	4,240	6,000	8,300	10,000	11,700
3	1,120	2,480	3,560	5,050	6,200	7,350
7	614	1,360	1,970	2,820	3,500	4,210
15	402	866	1,230	1,720	2,100	2,480
30	257	553	796	1,140	1,420	1,720
60	161	343	492	704	875	1,050
90	113	239	341	484	597	716

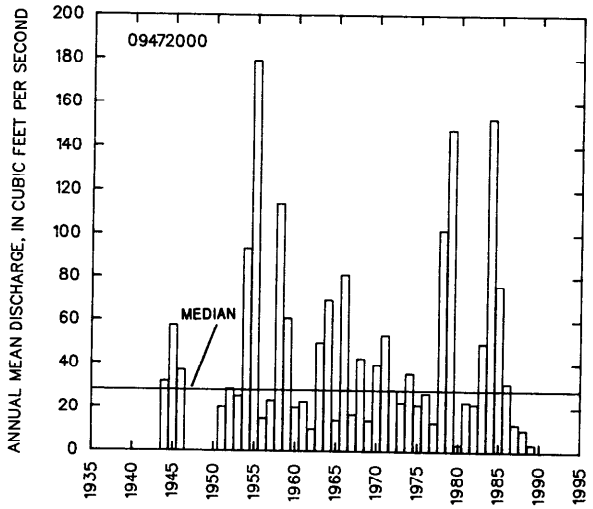
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1944-46, 1951-89

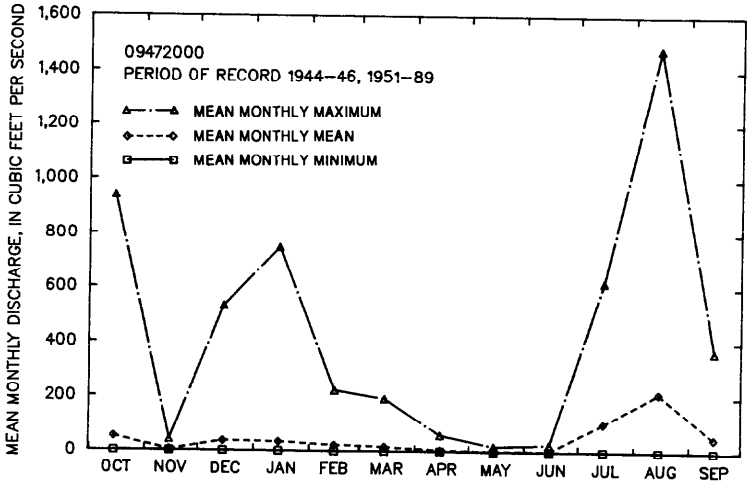
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
968	177	55	26	13	3.6	1.5	0.63	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09472000 SAN PEDRO RIVER NEAR REDINGTON, AZ--CONTINUED







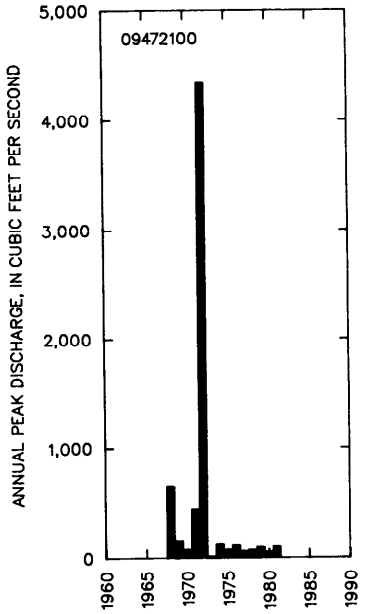
09472100 PECK CANYON TRIBUTARY NEAR REDINGTON, AZ

LOCATION.--Lat 32°29'12", long 110°30'00", in SW¼SW¼ sec.10, T.11 S., R.18 E., Pima County, Hydrologic Unit 15050203, on left bank 0.2 mi upstream from mouth and 4 miles north of Redington.

DRAINAGE AREA.--8.02 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1968	08-09-68	650	
1969	08-28-69	150	
1970	08-14-70	73	
1971	07-29-71	442	
1972	08-12-72	4,340	
1973	10-00-72	10	ES
1974	00-00-74	120	
1975	10-00-74	70	
1976	07-19-76	110	
1977	08-14-77	58	
1978	10-07-77	69	
1979	08-07-79	94	
1980	08-11-80	51	
1981	07-20-81	100	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
118	402	793	1,680	2,780	4,410

WEIGHTED SKEW (LOGS)= 0.27
MEAN (LOGS)= 2.10
STANDARD DEV. (LOGS)= 0.61

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
146	9.3	3,680	0.0	1.0	11.7	1.7	3.9

GILA RIVER BASIN

09472400 MAMMOTH WASH NEAR MAMMOTH, AZ

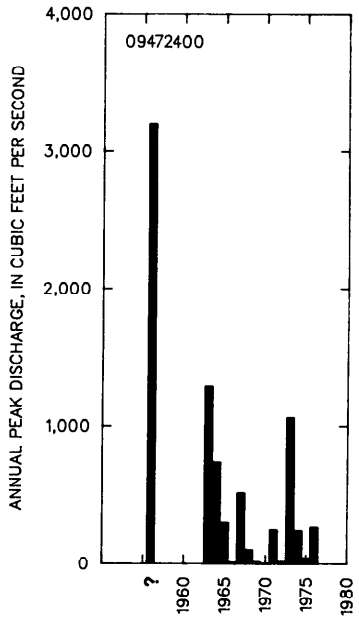
LOCATION.--Lat 32°40'35", long 110°41'05", in SW¼ sec.2, T.9 S., R.16 E., Pinal County, Hydrologic Unit 15050203, at State Highway 76, 3 miles southwest of Mammoth.

DRAINAGE AREA.--2.40 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
----	--------	[1]3,200	HP
1963	00-00-63	1,290	
1964	00-00-64	736	
1965	07-16-65	300	ES
1966	12-10-65	10	LT
1967	07-17-67	510	
1968	08-26-68	100	
1969	09-05-69	12	ES
1970	03-03-70	1.0	LT
1971	09-29-71	240	
1972	12-00-71	15	
1973	08-05-73	1,060	
1974	09-00-74	236	
1975	08-13-75	40	ES
1976	00-00-76	260	

[1]Highest since 1956, year of occurrence unknown.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1956, 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
167	752	1,540	3,130	4,810	6,960

WEIGHTED SKEW (LOGS)= -0.42
MEAN (LOGS)= 2.16
STANDARD DEV. (LOGS)= 0.83

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
181	4.2	3,700	0.0	1.0	13.8	1.8	4.1

09473000 ARAVAIPA CREEK NEAR MAMMOTH, AZ

LOCATION.--Lat 32°50'37", long 110°37'09", in NW¼NW¼ sec.9, T.7 S., R.17 E., Pinal County, Hydrologic Unit 15050203, on right bank 6 mi upstream from mouth and 9 mi north of Mammoth.

DRAINAGE AREA.--537 mi^2.

REMARKS.--Diversions for irrigation of several hundred acres above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1919	08-02-19	20,000		1971	08-21-71	1,780	
1920	01-05-20	7,400		1972	09-10-72	1,830	
1921	07-31-21	12,600		1973	10-19-72	8,200	
1931	08-20-31	4,700		1974	08-02-74	2,100	
1932	10-01-31	6,300		1975	10-22-74	836	
1933	07-23-33	9,340		1976	08-23-76	1,120	
1934	07-20-34	3,100		1977	07-12-77	2,560	
1935	08-15-35	10,200		1978	08-01-78	5,100	
1936	07-25-36	6,500		1979	12-18-78	16,200	
1937	02-07-37	3,380		1980	02-15-80	2,460	
1938	03-04-38	3,600		1981	08-10-81	2,460	
1939	08-05-39	6,450		1982	08-12-82	1,620	
1940	09-21-40	5,480		1983	03-19-83	3,920	
1941	12-31-40	9,600		1984	10-01-83	[1]70,800	
1965	09-03-65	4,480		1985	12-12-84	1,330	
1966	12-22-65	6,340		1986	03-14-86	1,060	
1967	09-25-67	2,340		1987	10-12-86	1,320	
1968	12-17-67	15,300		1988	07-31-88	1,040	
1969	08-29-69	1,800		1989	09-03-89	3,610	
1970	03-03-70	5,560					

[1]Highest in 1100 years based on Roberts (1987).

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
45.7	55.4	4,530	24.0	2.0	16.2	2.0	4.0

09473000 ARAVAIPA CREEK NEAR MAMMOTH, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1932-40, 1942, 1967-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,100	6.2	59	190	3.2	14.6
NOVEMBER	91	8.7	23	17	0.75	5.6
DECEMBER	474	9.7	48	85	1.8	11.8
JANUARY	230	10	37	41	1.1	9.1
FEBRUARY	215	11	59	58	0.98	14.5
MARCH	311	9.5	54	66	1.2	13.3
APRIL	47	7.2	19	11	0.58	4.6
MAY	45	4.3	14	9.4	0.69	3.4
JUNE	40	1.9	12	9.6	0.83	2.9
JULY	115	7.1	24	23	0.92	6.1
AUGUST	133	7.8	32	26	0.79	8.0
SEPTEMBER	56	5.4	25	14	0.54	6.2
ANNUAL	140	9.6	34	27	0.81	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-41, 1968-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	3.1	1.3	0.87	0.63	0.44	0.34
3	3.4	1.5	0.98	0.70	0.49	0.38
7	3.8	1.7	1.2	0.84	0.59	0.48
14	4.4	2.2	1.6	1.2	0.92	0.78
30	5.7	3.1	2.3	1.8	1.4	1.2
60	7.4	4.4	3.4	2.8	2.2	2.0
90	9.5	6.1	4.9	4.2	3.5	3.2
120	12	8.5	7.3	6.4	5.7	5.3
183	17	12	11	9.5	8.4	7.9

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 888, 1919-21, 1931-41, 1965-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,790	7,720	11,300	17,000	22,100	28,200

WEIGHTED SKEW (LOGS)= 0.07
MEAN (LOGS)= 3.58
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-40, 1942, 1967-89

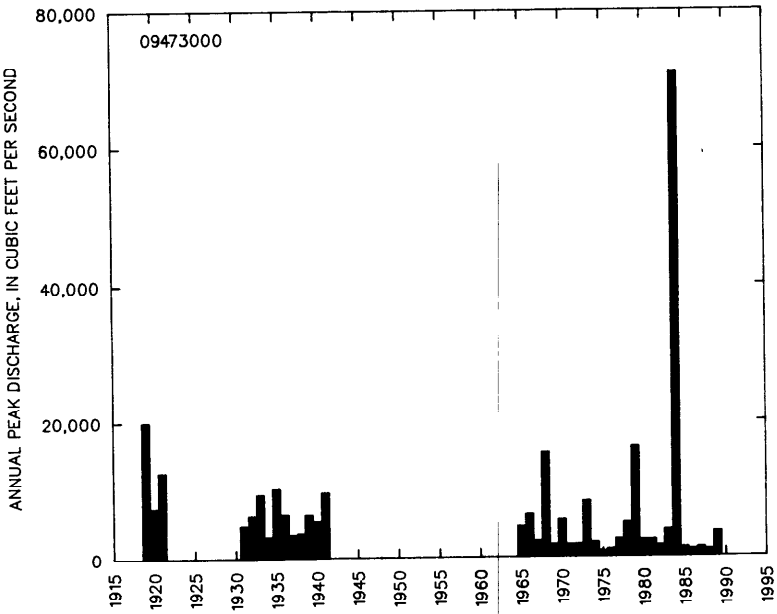
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	634	1,780	3,310	6,790	11,200	18,000
3	346	1,010	1,910	4,070	6,890	11,300
7	205	557	1,000	1,970	3,130	4,850
15	123	306	527	992	1,540	2,320
30	80	186	307	551	825	1,210
60	55	123	200	356	531	778
90	45	97	154	263	382	544

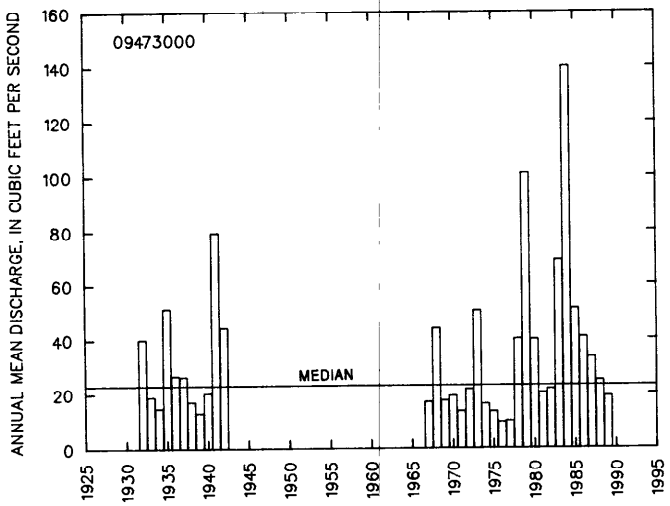
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-40, 1942, 1967-89

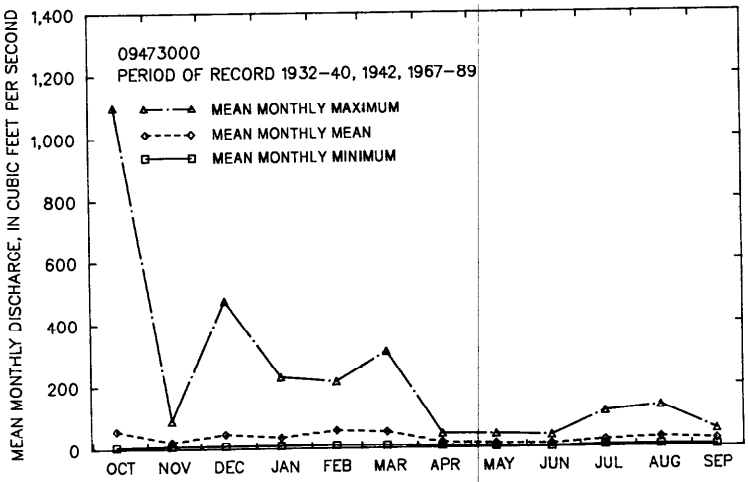
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
329	80	46	34	30	23	18	15	13	11	8.3	5.4	3.9	2.6	2.1	1.4	0.88

† Reliability of values in column is uncertain, and potential errors are large.

09473000 ARAVAIPA CREEK NEAR MAMMOTH, AZ--CONTINUED







09473200 GREEN LANTERN WASH NEAR WINKELMAN, AZ

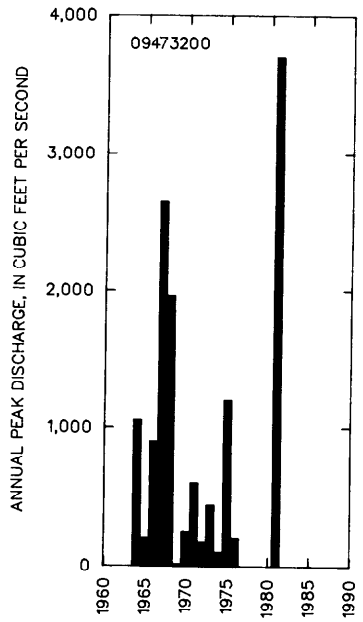
LOCATION.--Lat 32°55'30", long 110°43'35", in NE¼SE¼ sec.8, T.6 S., R.16 E., Pinal County, Hydrologic Unit 15050203, at State Highway 77, 5 miles southeast of Winkelman.

DRAINAGE AREA.--3.63 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-00-64	1,060	
1965	07-23-65	200	ES
1966	09-13-66	900	
1967	07-17-67	2,650	
1968	08-03-68	1,960	
1969	08-29-69	15	ES
1970	08-16-70	250	ES
1971	09-30-71	600	
1972	08-12-72	170	
1973	10-00-72	440	
1974	07-00-74	100	
1975	09-00-75	1,200	
1976	09-25-76	200	ES
1981	05-01-81	[1]3,700	HP

[1]Highest since 1964.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1964-76, 1981

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
509	1,380	2,290	3,920	5,520	7,490

WEIGHTED SKEW (LOGS)= -0.09
MEAN (LOGS)= 2.70
STANDARD DEV. (LOGS)= 0.52

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
189	4.8	2,590	0.0	1.0	14.0	1.9	4.1

09473500 SAN PEDRO RIVER AT WINKELMAN, AZ

LOCATION.--Lat 32°58'38", long 110°46'11", in SE¼SW¼ sec.24, T.5 S., R.15 E., Pinal County, Hydrologic Unit 15050203, on right bank 0.7 mi south of Winkelman, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--4,453 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1919	08-13-19	[1]20,000	ES,HP	1972	08-27-72	4,130	
1926	09-28-26	[2]85,000	ES,HP	1973	10-20-72	13,300	
1930	08-08-30	[3]25,000	ES,HP	1974	07-21-74	6,620	
1935	08-28-35	[4]20,000	ES,HP	1975	07-23-75	5,050	
1940	08-14-40	[5]45,000	ES,HP	1976	07-28-76	4,300	
1963	02-12-63	5,220		1977	09-11-77	4,900	
1964	08-15-64	6,460		1978	10-10-77	16,000	
1965	09-03-65	4,080		1979	12-18-78	18,000	
1966	12-22-65	16,800		1980	02-15-80	2,900	ES
1967	09-24-67	3,640		1981	07-19-81	3,800	
1968	12-20-67	15,000		1982	09-12-82	4,950	
1969	12-26-68	2,060		1983	01-30-83	6,730	
1970	03-03-70	6,340		1984	10-01-83	[2]135,000	
1971	08-19-71	10,500					

[1]Highest since 1917.
[2]Highest since 1906.
[3]Highest since 1927.
[4]Highest since 1931.
[5]Highest since 1927.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
18.0	176	4,520	15.0	1.7	15.3	1.9	3.8

MEAN MONTHLY AND ANNUAL DISCHARGES 1967-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	565	0.00	80	174	2.2	15.2
NOVEMBER	25	0.01	6.9	7.6	1.1	1.3
DECEMBER	538	0.34	55	153	2.8	10.5
JANUARY	48	2.3	15	17	1.1	2.9
FEBRUARY	206	0.76	43	73	1.7	8.1
MARCH	459	0.00	74	133	1.8	14.1
APRIL	35	0.00	8.2	11	1.4	1.6
MAY	7.2	0.00	1.6	2.2	1.4	0.3
JUNE	16	0.00	2.3	5.4	2.3	0.4
JULY	184	10	66	59	0.89	12.5
AUGUST	586	3.4	134	156	1.2	25.6
SEPTEMBER	81	0.13	39	27	0.68	7.5
ANNUAL	104	13	44	30	0.67	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.02	0.00	0.00	0.00	0.00	0.00
90	0.49	0.05	0.00	0.00	0.00	0.00
120	4.9	1.6	0.82	0.46	0.23	0.14
183	9.4	2.6	1.2	0.63	0.29	0.17

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-84

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
6,390	12,800	19,500	31,600	44,300	60,900

WEIGHTED SKEW (LOGS)= 0.68
MEAN (LOGS)= 3.84
STANDARD DEV. (LOGS)= 0.33

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-78

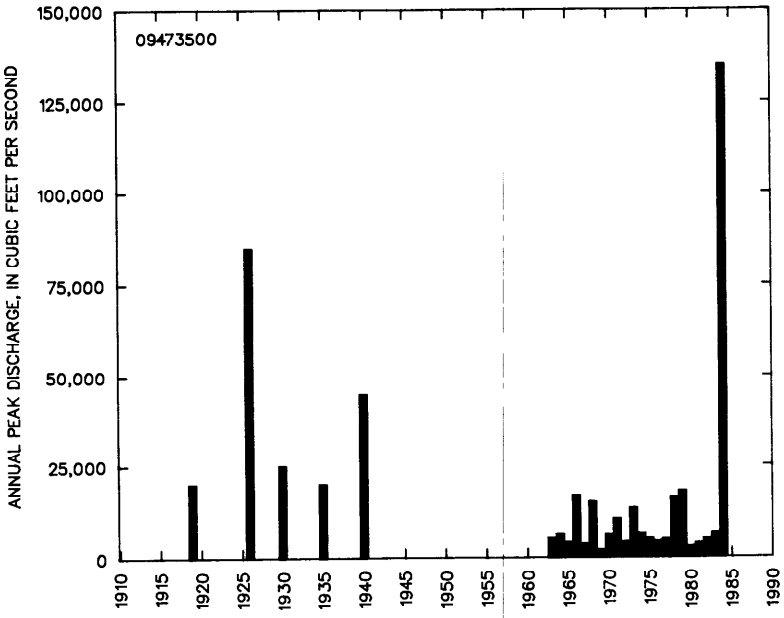
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	2,000	4,460	7,020	11,700	16,600	22,900
3	1,130	2,380	3,650	5,950	8,290	11,300
7	587	1,230	1,880	3,050	4,230	5,750
15	362	715	1,040	1,590	2,100	2,720
30	236	425	578	802	993	1,200
60	147	244	323	439	539	650
90	105	173	228	309	379	456

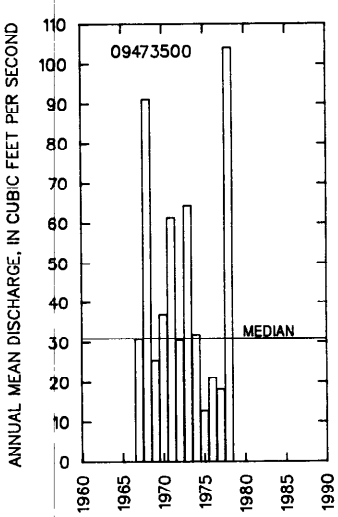
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-78

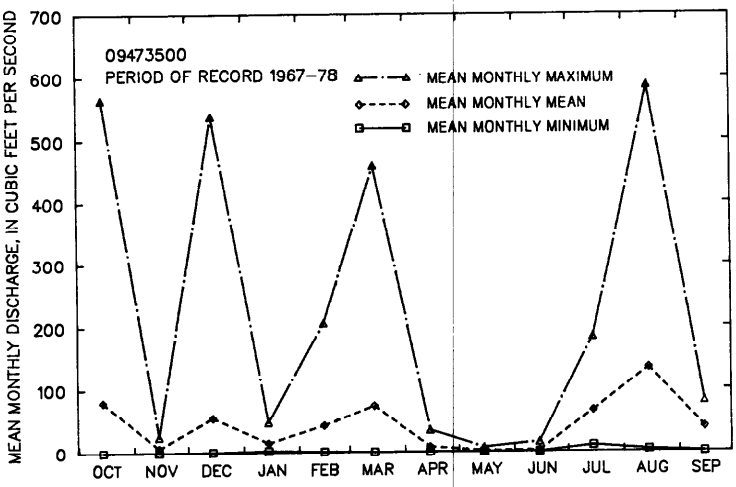
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
810	148	52	28	20	10	5.5	3.1	1.5	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09473500 SAN PEDRO RIVER AT WINKELMAN, AZ--CONTINUED







09473600 TAM O'SHANTER WASH NEAR HAYDEN, AZ

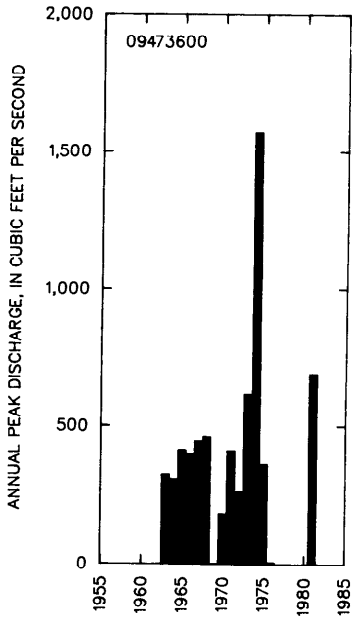
LOCATION.--Lat 33°01'46", long 110°52'22", in SE¼NW¼ sec.1, T.5 S., R.14 E., Pinal County, Hydrologic Unit 15050100, at State Highway 177, 6 miles west of Hayden.

DRAINAGE AREA.--4.37 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	322	
1964	00-00-64	305	
1965	07-00-65	412	
1966	09-13-66	399	
1967	07-22-67	445	
1968	08-03-68	460	
1969	00-00-69	0	
1970	03-03-70	180	
1971	09-30-71	410	
1972	09-02-72	260	
1973	05-31-73	615	
1974	08-02-74	1,570	
1975	09-13-75	360	
1976	00-00-76	5.0	
1981	00-00-81	[1]690	HP

[1]Highest since 1974.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1981

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
368	586	759	1,010	1,220	1,460

WEIGHTED SKEW (LOGS)=	0.28
MEAN (LOGS)=	2.58
STANDARD DEV. (LOGS)=	0.23

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
324	6.1	3,050	0.0	1.0	15.6	2.0	4.3

09474000 GILA RIVER AT KELVIN, AZ

LOCATION.--Lat 33°06'10", long 110°58'33", in NE¼NW¼ sec.12, T.4 S., R.13 E. , Pinal County, Hydrologic Unit 15050100, on left bank at Kelvin, 500 ft downstream from Mineral Creek, 18 mi downstream from San Pedro River, and 19 mi upstream from Ashurst-Hayden Dam.

DRAINAGE AREA.--18,011 mi^2, of which 5,125 mi^2 is below Coolidge Dam.

REMARKS.--Annual peak discharges are for unregulated flow.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1913	00-00-13	4,000		1952	01-14-52	5,430	
1914	09-21-14	17,600		1953	07-07-53	4,210	
1915	12-24-14	30,000	ES	1954	08-05-54	17,800	
1916	01-20-16	100,000		1955	08-08-55	9,860	
1917	08-13-17	20,000	ES	1956	08-17-56	1,800	
1918	08-06-18	10,000	ES	1957	08-19-57	4,300	
1919	08-03-19	18,000	ES	1958	08-06-58	5,000	
1920	12-05-19	15,000	ES	1959	08-17-59	5,930	
1921	07-31-21	15,000	ES	1960	12-26-59	11,200	
1922	07-26-22	7,400		1961	07-22-61	9,600	
1923	07-14-23	11,400		1962	12-16-61	4,910	
1924	08-03-24	2,000		1963	02-12-63	5,880	
1925	08-06-25	6,200		1964	08-15-64	4,150	
1926	09-28-26	81,000		1965	08-17-65	4,980	
1927	09-12-27	3,000	ES	1966	12-23-65	26,200	
1928	08-02-28	11,800		1967	09-24-67	3,900	
1929	09-24-29	11,400		1968	12-20-67	27,600	
1930	08-08-30	42,600		1969	01-22-69	5,000	
1931	08-30-31	28,100		1970	03-03-70	6,400	
1932	10-02-31	12,800		1971	08-20-71	3,120	
1933	07-24-33	8,100		1972	10-01-71	3,930	
1934	08-23-34	6,750		1973	10-20-72	10,300	
1935	08-29-35	21,000		1974	08-02-74	3,880	
1936	09-11-36	12,100		1975	07-23-75	2,000	
1937	08-21-37	10,100		1976	07-28-76	2,340	
1938	08-05-38	5,630		1977	09-11-77	2,220	ES
1939	08-07-39	9,320		1978	10-11-77	16,100	
1940	08-14-40	38,000		1979	12-19-78	27,000	
1941	12-31-40	23,300		1980	02-15-80	6,950	
1942	08-09-42	2,600		1981	08-01-81	3,320	
1943	09-26-43	6,100		1982	09-12-82	3,530	
1944	08-09-44	28,000		1983	03-19-83	4,490	
1945	08-10-45	9,200		1984	10-02-83	100,000	
1946	08-05-46	6,440		1985	12-30-84	6,150	
1947	08-08-47	10,000		1986	03-18-86	4,270	
1948	08-03-48	5,800		1987	08-04-87	1,670	
1949	09-15-49	5,600		1988	07-25-88	4,080	
1950	07-30-50	6,800		1989	07-24-89	1,720	
1951	08-03-51	13,100					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
17.8	284	5,150	13.0	2.2	15.7	1.9	3.6

09474000 GILA RIVER AT KELVIN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1929-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4,370	1.0	251	553	2.2	4.9
NOVEMBER	752	3.1	130	124	0.96	2.5
DECEMBER	1,690	7.1	300	384	1.3	5.9
JANUARY	2,000	9.3	241	366	1.5	4.7
FEBRUARY	2,900	22	338	399	1.2	6.6
MARCH	3,330	38	549	509	0.93	10.8
APRIL	1,210	9.2	448	255	0.57	8.8
MAY	1,110	2.5	421	269	0.64	8.3
JUNE	1,200	0.46	507	347	0.68	10.0
JULY	1,430	2.7	654	390	0.60	12.8
AUGUST	1,570	43	797	374	0.47	15.6
SEPTEMBER	923	2.1	459	229	0.50	9.0
ANNUAL	1,280	78	426	253	0.59	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1930-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	19	3.1	0.97	0.33	0.08	0.03
3	20	3.3	1.0	0.35	0.09	0.03
7	22	3.6	1.2	0.40	0.11	0.04
14	25	4.5	1.5	0.57	0.17	0.07
30	35	6.4	2.2	0.79	0.22	0.09
60	69	16	6.1	2.4	0.76	0.33
90	104	30	13	5.9	2.2	1.0
120	135	52	27	14	6.3	3.4
183	218	108	66	41	22	14

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

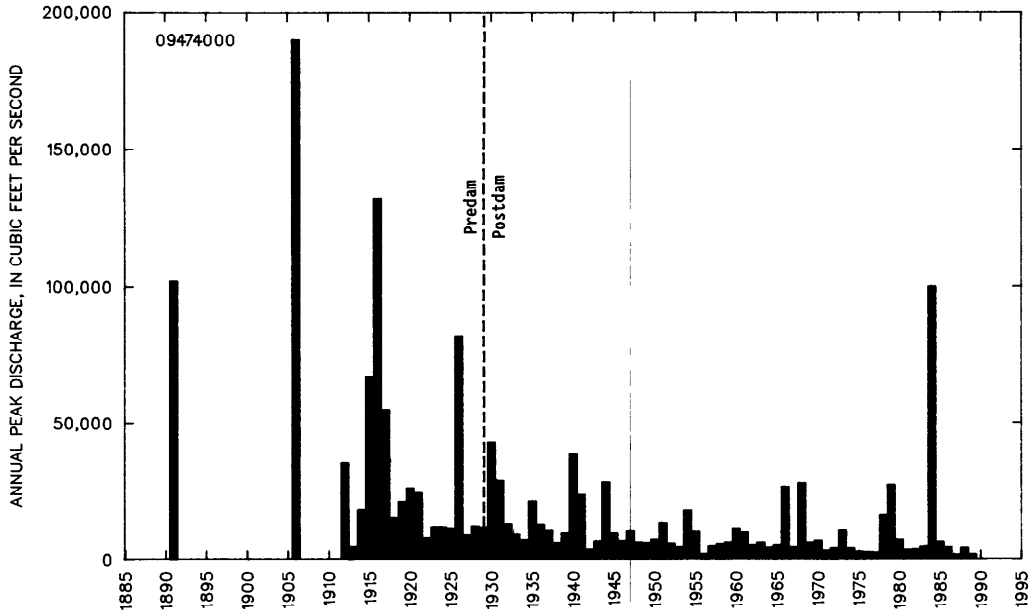
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1929-89

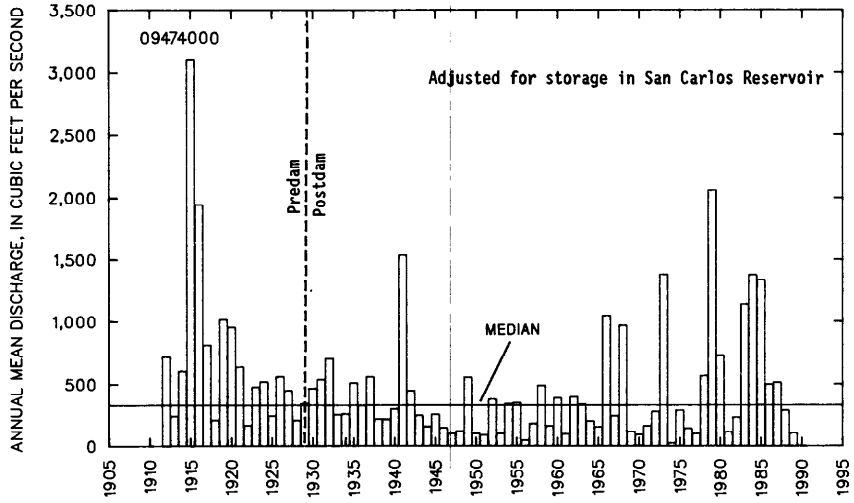
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,270	7,080	11,300	19,400	28,200	40,400
3	2,100	4,190	6,360	10,400	14,600	20,300
7	1,400	2,600	3,750	5,730	7,670	10,100
15	1,040	1,820	2,520	3,630	4,660	5,870
30	865	1,430	1,880	2,540	3,110	3,750
60	732	1,190	1,530	2,010	2,390	2,790
90	653	1,090	1,390	1,790	2,090	2,390

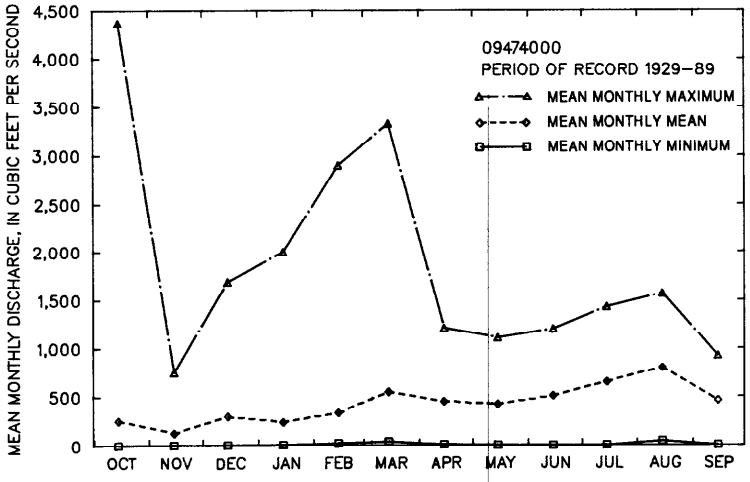
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,530	1,220	965	791	678	516	382	282	203	141	85	30	10	1.8	0.83	0.57	0.17

09474000 GILA RIVER AT KELVIN AZ--CONTINUED







09478200 DURHAM WASH NEAR FLORENCE, AZ

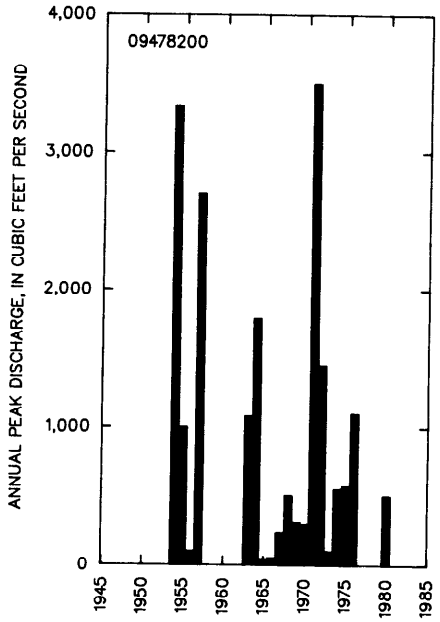
LOCATION.--Lat 32°43'20", long 111°06'30", in NE¼ sec.21, T.8 S., R.12 E., Pinal County, Hydrologic Unit 15050100, at U.S. Highway 80, 27 miles southeast of Florence.

DRAINAGE AREA.--15.6 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1954	07-20-54	3,340	
1955	08-00-55	1,000	
1956	07-00-56	100	ES
1957	00-00-57	2,700	
1963	09-01-63	1,080	
1964	09-14-64	[1]1,790	
1965	09-08-65	40	ES
1966	12-00-65	50	ES
1967	09-25-67	230	
1968	00-00-68	500	
1969	00-00-69	310	
1970	08-00-70	290	
1971	08-20-71	[2]3,500	
1972	06-00-72	1,450	
1973	10-19-72	100	ES
1974	08-02-74	550	
1975	09-13-75	570	
1976	09-25-76	1,100	
1980	07-00-80	[3]500	HP

[1]Highest since 1957.
[2]Highest since 1954.
[3]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1954-57, 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
561	1,320	2,050	3,260	4,390	5,710

WEIGHTED SKEW (LOGS)= -0.08
MEAN (LOGS)= 2.74
STANDARD DEV. (LOGS)= 0.45

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
143	11.0	3,670	0.0	3.0	12.1	1.9	4.3

09478500 QUEEN CREEK AT WHITLOW DAMSITE, NEAR SUPERIOR, AZ

LOCATION.--Lat 33°17'55", long 111°16'25", in NW¼SE¼ sec.36, T.1 S., R.10 E., Pinal County, Hydrologic Unit 15050100, at Whitlow damsite, 2.5 mi upstream from Whitlow Canyon, 4 mi northeast of Florence Junction, and 10 mi west of Superior.

DRAINAGE AREA.--144 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1917	05-20-17	2,800	
1918	08-05-18	5,000	
1919	08-01-19	10,000	
1920	02-20-20	750	
1939	08-06-39	13,200	
1948	07-21-48	676	
1949	07-22-49	2,630	
1950	07-18-50	5,100	
1951	08-03-51	1,510	
1952	01-18-52	1,170	
1953	07-29-53	1,780	
1954	08-19-54	42,900	
1955	08-03-55	5,430	
1956	08-17-56	4,100	
1957	08-19-57	8,260	
1958	03-22-58	3,970	
1959	08-17-59	30,000	ES

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
137	19.4	3,180	5.6	1.0	17.9	2.4	4.8

09478500 QUEEN CREEK AT WHITLOW DAMSITE NEAR SUPERIOR, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1949-58

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	8.5	0.00	1.1	2.7	2.4	2.3
NOVEMBER	3.8	0.00	0.61	1.2	2.0	1.2
DECEMBER	13	0.00	2.0	4.0	2.0	4.1
JANUARY	17	0.00	3.8	5.1	1.4	7.7
FEBRUARY	4.4	0.00	0.65	1.4	2.1	1.3
MARCH	50	0.00	13	18	1.4	25.6
APRIL	8.9	0.00	1.7	3.3	2.0	3.5
MAY	2.4	0.00	0.55	0.87	1.6	1.1
JUNE	10	0.00	1.4	3.2	2.2	2.9
JULY	19	0.30	5.6	6.8	1.2	11.4
AUGUST	106	0.03	18	32	1.8	37.4
SEPTEMBER	2.8	0.00	0.75	1.2	1.6	1.5
ANNUAL	14	1.3	4.1	3.7	0.89	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1950-58

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.14	0.00	0.00	0.00	0.00	0.00
183	0.84	0.23	0.10	0.04	0.02	0.01

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1917-20, 1939, 1948-59

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
3,630	8,850	14,300	24,000	33,800	46,100

WEIGHTED SKEW (LOGS)= 0.13
MEAN (LOGS)= 3.57
STANDARD DEV. (LOGS)= 0.45

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1949-58

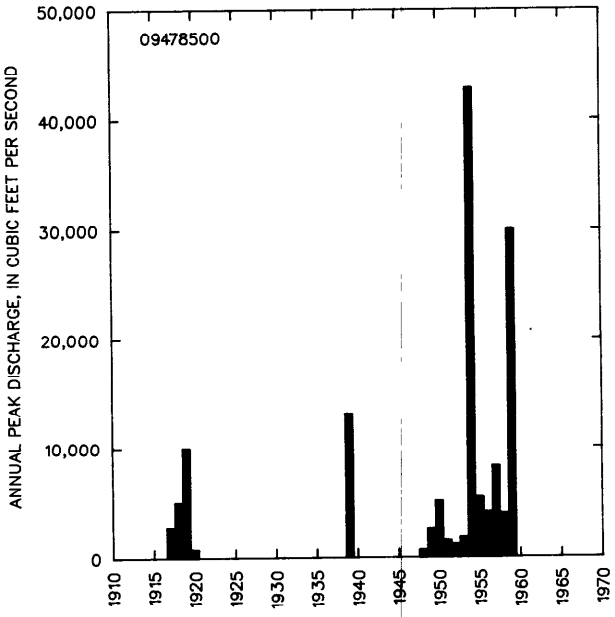
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	297	670	1,150	2,250	3,650	5,860
3	122	266	436	792	1,210	1,830
7	60	129	205	354	518	745
15	35	76	118	195	274	376
30	22	43	65	103	142	193
60	12	24	35	53	71	93
90	9.1	18	27	40	54	69

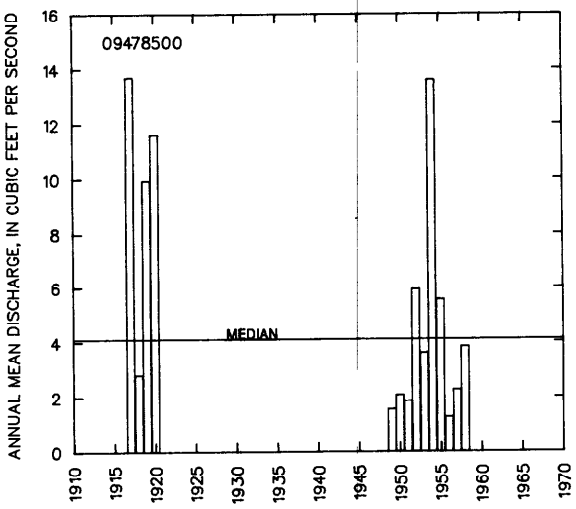
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1949-58

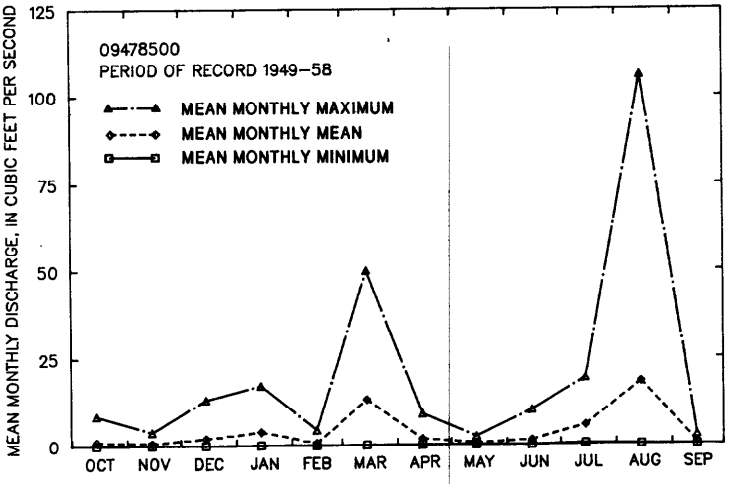
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
88	3.3	1.7	0.96	0.53	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09478500 QUEEN CREEK AT WHITLOW DAMSITE, NEAR SUPERIOR, AZ--CONTINUED







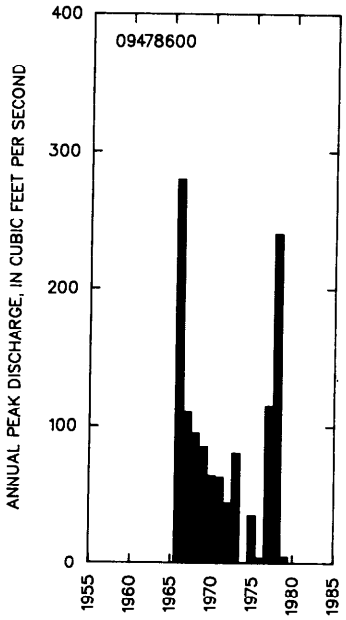
09478600 QUEEN CREEK TRIBUTARY NO. 3 AT WHITLOW DAM, AZ

LOCATION.--Lat 33°17'30", long 111°16'50", in N½ sec.1, T.2 S., R.10 E., Pinal County, Hydrologic Unit 15050100, 0.5 mi south of Whitlow Dam, and 4.5 miles northeast of Florence Junction.

DRAINAGE AREA.--0.37 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	09-13-66	280	
1967	08-00-67	110	
1968	08-00-68	95	
1969	09-16-69	85	
1970	08-09-70	64	
1971	08-00-71	63	
1972	08-00-72	44	
1973	10-19-72	80	
1974	00-00-74	0	
1975	09-05-75	35	
1976	04-16-76	4.0	
1977	10-23-76	115	
1978	03-02-78	240	
1979	12-18-78	5.0	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
71.3	135	189	270	339	417

WEIGHTED SKEW (LOGS)= -0.00
MEAN (LOGS)= 1.85
STANDARD DEV. (LOGS)= 0.33

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
187	1.1	2,320	0.0	1.0	12.0	1.8	3.9

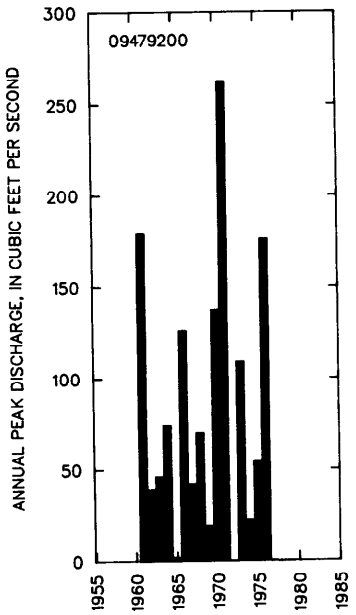
09479200 QUEEN CREEK TRIBUTARY AT APACHE JUNCTION, AZ

LOCATION.--Lat 33°24'13", long 111°32'27", in NE¼SW¼ sec.21, T.1 N., R.8 E., Pinal County, Hydrologic Unit 15050100, at eastbound lane of U.S. Highway 60, 0.6 mi southeast of Apache Junction.

DRAINAGE AREA.--0.51 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1961	08-18-61	179
1962	11-21-61	39
1963	08-17-63	46
1964	09-14-64	74
1965	08-17-65	1.7
1966	08-30-66	126
1967	07-11-67	42
1968	08-03-68	70
1969	09-16-69	19
1970	09-05-70	137
1971	09-30-71	262
1972	00-00-72	0
1973	10-18-72	109
1974	07-07-74	22
1975	09-05-75	54
1976	07-24-76	176
1977	00-00-77	0
1978	00-00-78	0
1979	00-00-79	0



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2† 50%	5† 20%	10† 10%	25† 4%	50† 2%	100† 1%
52.5	120	179	269	346	431

WEIGHTED SKEW (LOGS)=	-0.31
MEAN (LOGS)=	1.70
STANDARD DEV. (LOGS)=	0.45

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
76.2	1.4	1,760	0.0	1.0	10.5	1.6	3.6

09479500 GILA RIVER NEAR LAVEEN, AZ

LOCATION.--Lat 33°15'25", long 112°09'59", in SW¼NW¼ sec.16, T.2 S., R.2 E., Pinal County, Hydrologic Unit 15050100, in Gila River Indian Reservation, on left abutment of highway bridge, 2.1 mi upstream from Santa Cruz River, 2.6 mi south of Komatke, and 7.3 mi south of Laveen.

DRAINAGE AREA.--20,615 mi^2, of which 696 mi^2 is in Mexico.

REMARKS.--Records include flow over dam and in overflow channel. Large diversions above station for irrigation. Most low flow is waste water from irrigated lands and from Chandler, Arizona treatment plant (1979-83). Flow partly regulated by storage in San Carlos Reservoir. (See elsewhere in this report.)

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-20-16	[1]65,000	ES,HP	1965	02-09-65	85	UR
1926	09-28-26	[2]40,000	ES,HP	1966	12-26-65	10,900	UR
1940	08-17-40	8,740	UR	1967	09-28-67	350	UR
1941	01-02-41	11,900	UR	1968	12-23-67	5,890	UR
1942	12-12-41	1,170	UR	1969	00-00-69	0	UR
1943	09-27-43	1,570	UR	1970	03-05-70	178	UR
1944	08-11-44	1,330	UR	1971	08-23-71	1,130	UR
1945	08-13-45	2,800	UR	1972	10-03-71	544	UR
1946	09-20-46	1,260	UR	1973	10-23-72	1,500	UR
1948	08-05-48	1,430	UR	1974	08-07-74	1,220	UR
1949	08-10-49	1,250	UR	1975	11-02-74	19	UR
1950	08-02-50	1,500	UR	1976	09-25-76	397	UR
1951	08-29-51	1,210	UR	1977	10-22-76	430	UR
1952	01-20-52	1,070	UR	1978	10-13-77	6,360	UR
1953	07-31-53	565	UR	1979	12-21-78	9,720	UR
1954	08-08-54	4,510	UR	1980	02-23-80	545	UR
1955	08-24-55	3,230	UR	1981	03-03-81	20	MD,U
1956	01-31-56	46	UR	1982	09-15-82	194	MD,U
1957	08-20-57	446	UR	1983	02-09-83	385	UR
1958	08-19-58	995	UR	1984	10-04-83	35,000	UR
1959	08-19-59	934	UR	1985	01-11-85	2,080	MD,U
1960	01-14-60	1,760	UR	1986	12-10-85	10	UR
1961	08-25-61	655	UR	1987	02-25-87	7.1	UR
1962	12-18-61	1,020	UR	1988	12-18-87	16	UR
1963	02-14-63	798	UR	1989	01-05-89	12	UR
1964	08-17-64	996	UR				

[1]Highest since 1907.
[2]Highest since 1916.

09479500 GILA RIVER NEAR LAVEEN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-46, 1949-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	2,660	0.00	66	388	5.9	16.3
NOVEMBER	182	0.00	9.3	29	3.1	2.3
DECEMBER	518	0.00	43	115	2.7	10.6
JANUARY	1,100	0.00	70	210	3.0	17.2
FEBRUARY	1,300	0.00	58	201	3.5	14.4
MARCH	1,060	0.00	52	176	3.4	12.9
APRIL	98	0.00	6.5	18	2.7	1.6
MAY	26	0.00	2.0	4.6	2.3	0.5
JUNE	12	0.00	1.1	2.4	2.1	0.3
JULY	249	0.00	15	41	2.7	3.7
AUGUST	895	0.00	67	160	2.4	16.6
SEPTEMBER	106	0.00	15	26	1.8	3.6
ANNUAL	285	0.00	34	64	1.9	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-46, 1949-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
---	---	----	----	----	----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-46, 1949-89

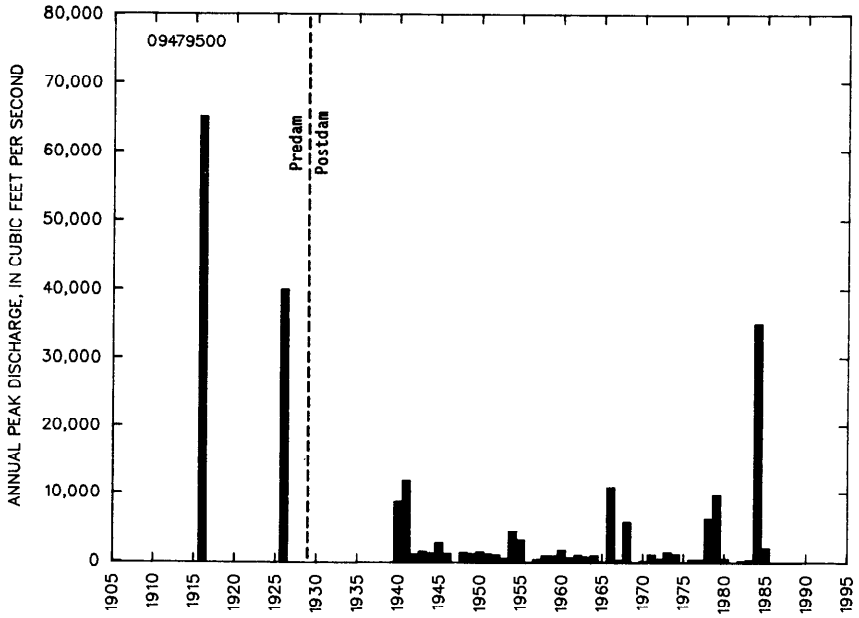
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	546	2,500	4,850	8,970	12,800	17,100
3	344	1,650	3,270	6,150	8,830	11,900
7	185	943	1,920	3,710	5,410	7,370
15	100	542	1,150	2,310	3,470	4,870
30	62	348	748	1,530	2,320	3,270
60	36	210	459	957	1,470	2,090
90	25	151	338	726	1,140	1,660

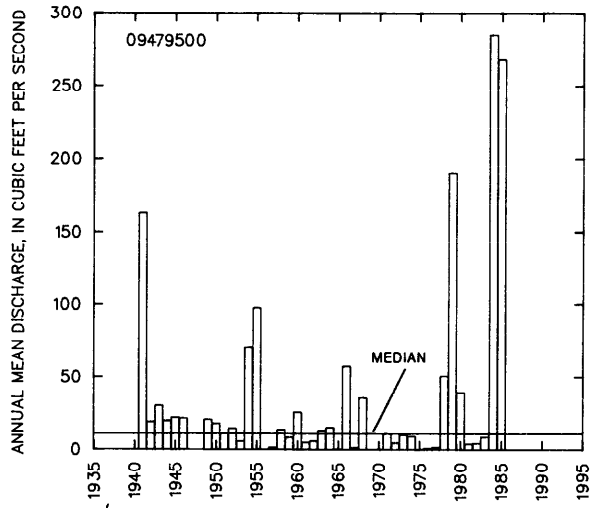
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-46, 1949-89

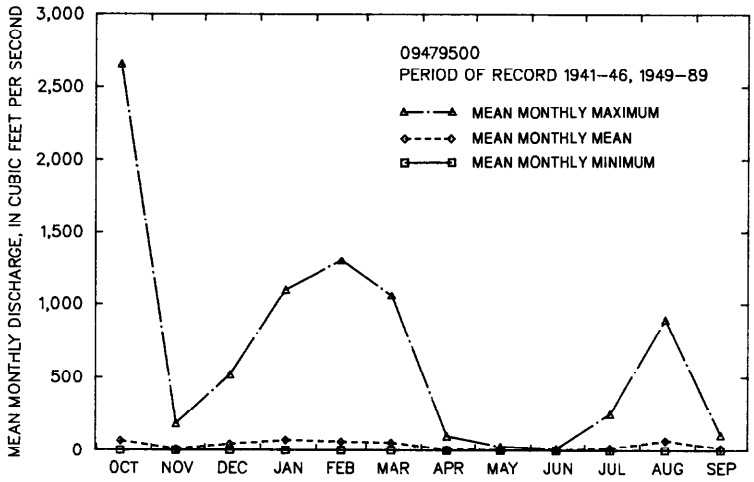
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
869	48	17	9.3	6.1	2.4	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09479500 GILA RIVER NEAR LAVEEN, AZ--CONTINUED







09480000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ

LOCATION.--Lat 31°21'19", long 110°35'20", in SW; sec.11, T.24 S., R.17 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, on southern border of Spanish land grant of San Rafael, near left bank on downstream side of pier of bridge on county road, 1.7 mi upstream from international boundary and 2.5 mi northeast of Lochiel.

DRAINAGE AREA.--82.2 mi^2.

REMARKS.-Small diversions for irrigation of 200 acres above station, mostly by pumping from ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1949	09-13-49	1,650	1970	08-03-70	880
1950	07-30-50	4,520	1971	08-10-71	2,830
1951	08-02-51	2,560	1972	07-16-72	2,070
1952	08-16-52	550	1973	06-30-73	1,490
1953	07-14-53	3,320	1974	08-04-74	1,730
1954	07-22-54	1,570	1975	07-22-75	3,330
1955	08-06-55	4,300	1976	07-22-76	3,540
1956	07-17-56	1,360	1977	09-05-77	1,130
1957	08-09-57	688	1978	10-09-77	[1]12,000
1958	08-07-58	380	1979	01-25-79	1,060
1959	08-14-59	243	1980	06-30-80	406
1960	07-30-60	625	1981	07-15-81	1,110
1961	08-08-61	1,120	1982	08-11-82	2,640
1962	07-29-62	7.6	1983	03-04-83	1,120
1963	08-25-63	2,390	1984	08-15-84	12,000
1964	09-09-64	2,330	1985	07-19-85	850
1965	09-12-65	4,810	1986	08-29-86	4,210
1966	08-18-66	1,780	1987	08-10-87	291
1967	08-03-67	1,870	1988	08-23-88	804
1968	12-20-67	986	1989	08-04-89	871
1969	08-05-69	484			

[1]Highest since 1926.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
42.2	12.0	5,150	31.0	2.3	18.2	1.9	4.3

09480000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1950-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	77	0.00	5.2	17	3.2	11.1
NOVEMBER	6.8	0.00	1.1	1.5	1.4	2.3
DECEMBER	18	0.00	1.8	3.7	2.0	3.9
JANUARY	47	0.02	2.7	8.3	3.1	5.7
FEBRUARY	18	0.03	1.7	3.4	2.0	3.6
MARCH	34	0.01	1.9	5.6	2.9	4.0
APRIL	5.2	0.00	0.74	1.2	1.6	1.6
MAY	2.8	0.00	0.39	0.67	1.7	0.8
JUNE	2.8	0.00	0.30	0.65	2.2	0.6
JULY	69	0.03	8.4	16	1.8	17.8
AUGUST	187	0.00	17	38	2.2	37.0
SEPTEMBER	44	0.00	5.3	9.5	1.8	11.4
ANNUAL	29	0.31	3.9	5.3	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1950-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.06
90	0.00	0.00	0.00	0.00	0.01	0.10
120	0.00	0.00	0.00	0.05	0.12	0.41
183	0.74	0.21	0.10	0.05	0.02	0.01

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1949-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1,460	2,950	4,330	6,590	8,700	11,200

WEIGHTED SKEW (LOGS)= 0.20
MEAN (LOGS)= 3.17
STANDARD DEV. (LOGS)= 0.35

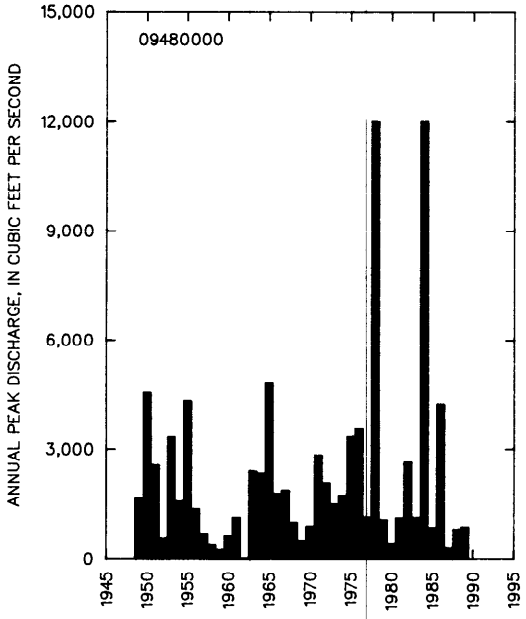
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1950-89

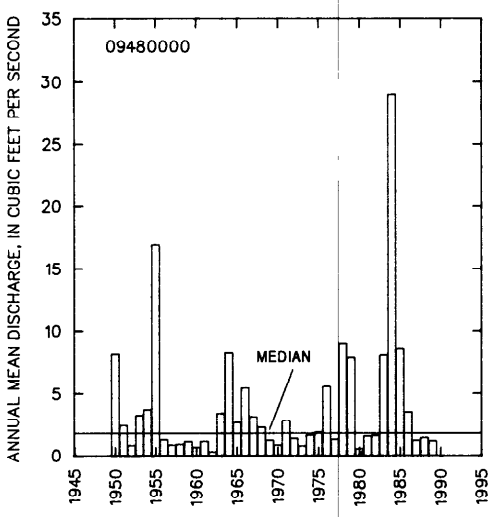
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	170	439	661	963	1,190	1,410
3	75	211	343	553	735	937
7	38	114	196	341	482	651
15	22	66	115	202	290	398
30	14	41	72	130	190	267
60	8.7	25	43	77	114	161
90	6.3	17	30	54	80	114

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1950-89

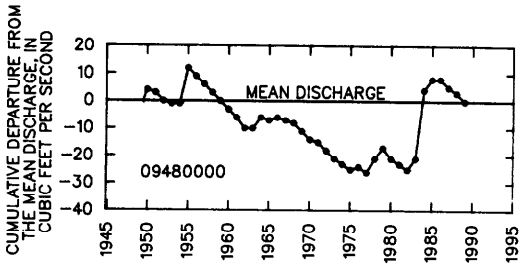
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
59	9.1	4.3	2.5	1.6	0.95	0.64	0.45	0.30	0.20	0.10	0.00	0.00	0.00	0.00	0.00	0.00

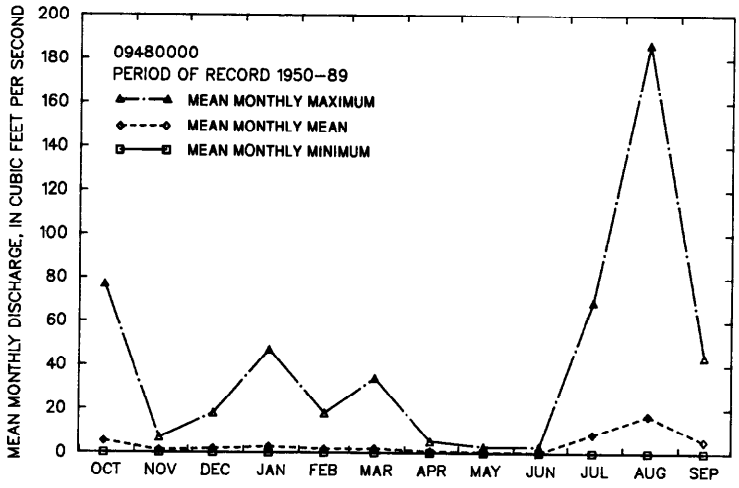
† Reliability of values in column is uncertain, and potential errors are large.


09480000
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
15,000
12,000
9,000
6,000
3,000
0
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995


09480000
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
35
30
25
20
15
10
5
0
MEDIAN
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995

09480000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ--CONTINUED





09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ

LOCATION.--Lat 31°20'40", long 110°51'03", in NW¼ sec.18, T.24 S., R.15 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, in Spanish land grant of Maria Santisima del Carmen, on left bank 0.8 mi downstream from international boundary and 5.5 mi east of Nogales.

DRAINAGE AREA.--533 mi^2, of which 348 mi^2 is in Mexico.

REMARKS.--Diversions above station of about 4,300 acre-ft-yr for irrigation of about 2,150 acres in Mexico in 1977. Diversion 19 mi upstream for municipal supply of city of Nogales, Sonora, began in 1949; diversion in 1968 totaled 3500 acre-ft-yr.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1930	08-07-30	5,400	1960	01-11-60	2,760
1931	08-04-31	4,150	1961	08-15-61	1,640
1932	07-08-32	6,400	1962	08-19-62	2,390
1933	09-19-33	1,900	1963	07-10-63	4,510
1934	08-00-34	5,900	1964	08-14-64	5,630
1935	08-31-35	12,000	1965	09-13-65	1,580
1936	08-09-36	4,050	1966	08-20-66	4,400
1937	08-16-37	2,400	1967	07-27-67	6,310
1938	07-28-38	2,200	1968	12-20-67	15,200
1939	08-13-39	7,010	1969	08-02-69	4,460
1940	08-04-40	1,800	1970	08-16-70	4,100
1941	07-21-41	1,980	1971	08-20-71	2,930
1942	07-08-42	8,200	1972	10-24-71	738
1943	07-30-43	5,300	1973	02-22-73	2,300
1944	08-15-44	4,700	1974	08-01-74	17,100
1945	07-30-45	3,290	1975	07-22-75	11,400
1946	07-26-46	7,200	1976	07-22-76	6,700
1947	08-29-47	2,550	1977	08-18-77	6,700
1948	08-01-48	3,410	1978	10-09-77	[1]31,000
1949	09-14-49	6,350	1979	12-18-78	12,700
1950	07-20-50	7,210	1980	08-09-80	1,950
1951	08-03-51	3,040	1981	07-29-81	3,220
1952	07-29-52	2,330	1982	10-02-81	1,620
1953	07-14-53	3,500	1983	02-04-83	6,410
1954	07-10-54	10,600	1984	10-02-83	16,200
1955	08-20-55	11,100	1985	12-27-84	7,080
1956	06-28-56	2,530	1986	08-30-86	2,440
1957	08-18-57	1,620	1987	08-10-87	3,560
1958	08-13-58	4,000	1988	09-12-88	2,940
1959	08-06-59	2,640	1989	08-16-89	663

[1]Highest since 1892.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
26.0	51.2	4,850	28.0	2.1	18.7	2.0	4.3

09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1914, 1917-19, 1931-33, 1936-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	904	0.00	27	123	4.5	8.1
NOVEMBER	120	0.00	9.0	18	2.0	2.7
DECEMBER	542	0.00	38	106	2.8	11.4
JANUARY	492	0.00	34	88	2.6	10.1
FEBRUARY	370	0.00	31	67	2.2	9.2
MARCH	318	0.00	22	52	2.3	6.6
APRIL	50	0.00	6.2	10	1.6	1.9
MAY	17	0.00	1.8	3.4	1.9	0.5
JUNE	24	0.00	1.3	3.9	2.9	0.4
JULY	254	0.00	44	55	1.3	13.1
AUGUST	745	1.5	92	125	1.4	27.6
SEPTEMBER	159	0.00	28	37	1.3	8.4
ANNUAL	123	3.4	28	30	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914, 1918-20, 1932-33, 1937-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1930-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,100	7,680	10,700	15,200	19,200	23,600

WEIGHTED SKEW (LOGS)= 0.04
MEAN (LOGS)= 3.62
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914, 1917-19, 1931-33, 1936-89

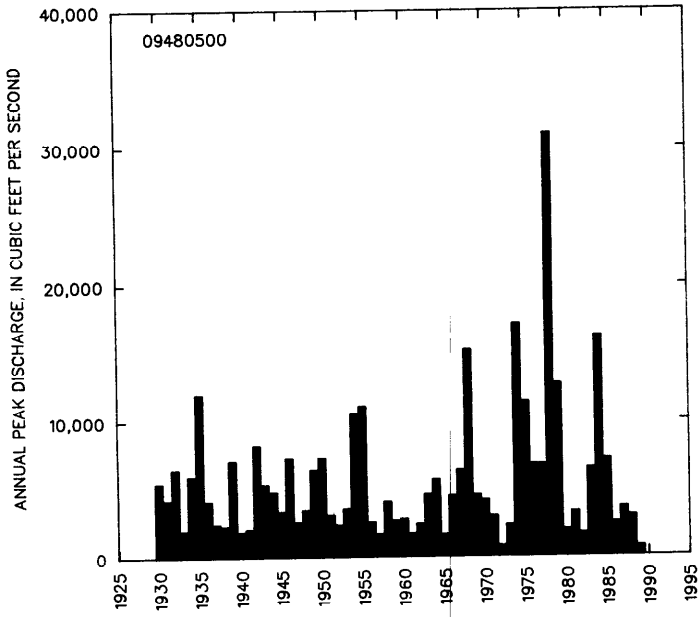
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	696	1,840	3,150	5,670	8,380	12,000
3	405	1,080	1,860	3,380	5,020	7,240
7	250	641	1,070	1,870	2,700	3,790
15	163	399	645	1,090	1,530	2,090
30	111	262	413	677	934	1,250
60	73	172	272	447	617	827
90	52	123	195	323	449	607

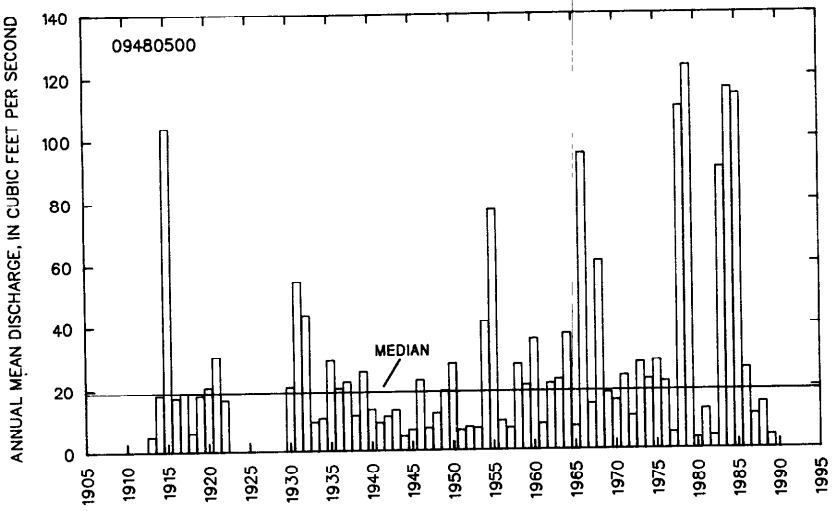
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914, 1917-19, 1931-33, 1936-89

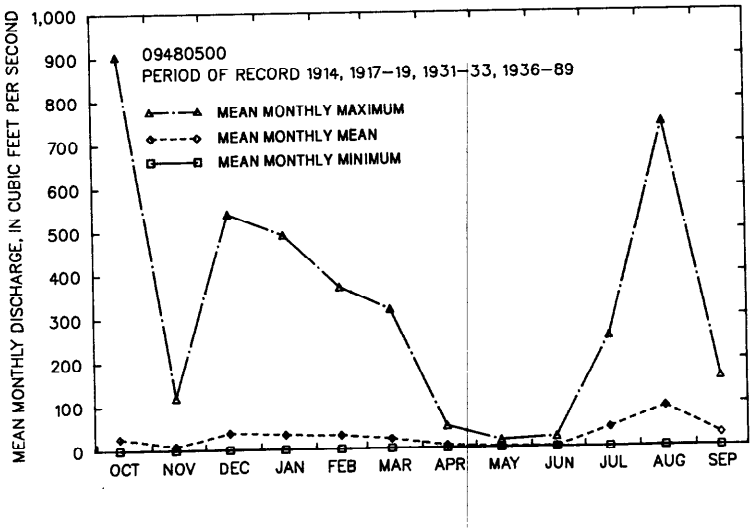
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
454	103	43	26	17	8.0	5.0	3.0	1.6	0.81	0.33	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ--CONTINUED







09481500 SONOITA CREEK NEAR PATAGONIA, AZ

LOCATION.--Lat 31°30'00", long 110°49'00", in SE¼SW¼ sec.21, T.22 S., R.15 E., Santa Cruz County, Hydrologic Unit 15050301, on left abutment of former railroad bridge, 5 mi downstream from Patagonia.

DRAINAGE AREA.--209 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1930	08-07-30	2,600		1953	07-14-53	2,870	
1931	07-28-31	1,900		1954	07-20-54	4,670	
1932	07-26-32	1,700		1955	08-12-55	6,920	
1933	07-15-33	1,050		1956	07-19-56	780	
1934	08-00-34	11,000		1957	08-02-57	4,860	
1935	08-23-35	4,700		1958	07-05-58	5,590	
1936	08-09-36	3,600		1959	08-24-59	2,310	
1937	09-06-37	3,600		1960	08-13-60	1,550	
1938	09-09-38	3,400		1961	10-09-60	2,760	
1939	08-08-39	3,300		1962	12-15-61	680	
1940	08-13-40	2,580		1963	08-26-63	4,320	
1941	08-09-41	2,150		1964	09-10-64	2,640	
1942	09-12-42	1,000		1965	09-08-65	806	
1943	08-28-43	4,530		1966	08-18-66	4,120	
1944	08-09-44	669		1967	07-03-67	2,060	
1945	08-06-45	3,140		1968	12-20-67	5,410	
1946	09-30-46	14,000		1969	08-24-69	450	
1947	08-12-47	2,360		1970	08-03-70	622	
1948	08-15-48	4,750		1971	08-11-71	2,860	
1949	08-08-49	5,790		1972	09-09-72	368	
1950	07-30-50	7,300		1978	10-09-77	[1]7,380	HP
1951	08-02-51	5,030		1984	10-02-83	[2]16,000	HP
1952	08-14-52	3,630					

[1]Highest since 1946.
[2]Highest since 1930.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
76.7	21.7	4,800	52.0	2.0	19.3	2.0	4.1

09481500 SONOITA CREEK NEAR PATAGONIA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1931-33, 1936-72

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	20	0.03	3.9	3.9	0.99	4.0
NOVEMBER	18	0.32	4.0	3.3	0.83	4.1
DECEMBER	107	0.99	10	21	2.1	10.5
JANUARY	52	1.1	7.5	8.9	1.2	7.8
FEBRUARY	96	0.99	9.9	18	1.8	10.2
MARCH	16	0.87	5.5	3.3	0.61	5.7
APRIL	12	0.49	4.1	2.9	0.70	4.3
MAY	10	0.06	2.5	2.4	0.95	2.6
JUNE	8.6	0.00	1.6	2.1	1.3	1.7
JULY	112	0.06	13	19	1.4	13.5
AUGUST	151	1.5	25	27	1.1	26.1
SEPTEMBER	71	0.05	9.2	13	1.4	9.5
ANNUAL	33	1.9	8.1	5.6	0.69	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1932-33, 1937-72

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.08	0.00	0.00	0.00	0.00	0.00
7	0.11	0.00	0.00	0.00	0.00	0.00
14	0.19	0.00	0.00	0.00	0.00	0.00
30	0.35	0.05	0.00	0.00	0.00	0.00
60	0.70	0.18	0.08	0.03	0.00	0.00
90	1.3	0.52	0.31	0.20	0.12	0.09
120	2.4	1.3	0.97	0.74	0.55	0.45
183	3.8	2.2	1.6	1.2	0.90	0.73

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1930-72, 1978, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,130	5,360	7,190	9,950	12,300	15,100

WEIGHTED SKEW (LOGS)= 0.22
MEAN (LOGS)= 3.51
STANDARD DEV. (LOGS)= 0.27

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1931-33, 1936-72

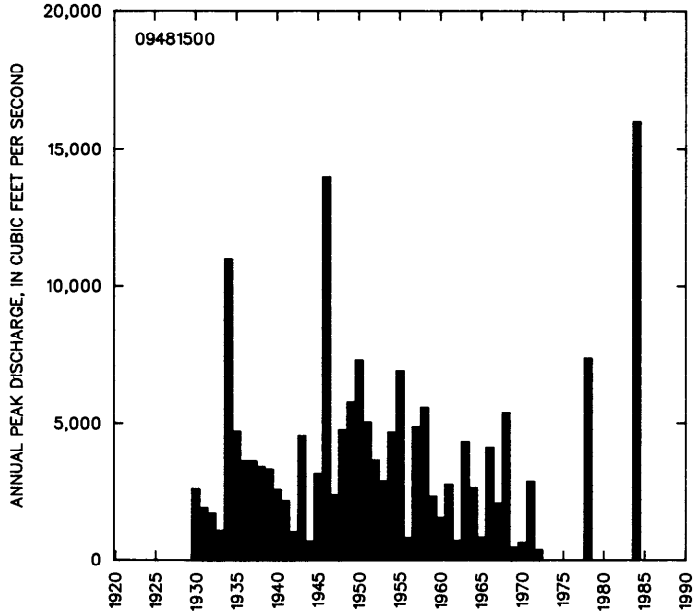
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	277	599	881	1,310	1,680	2,090
3	132	285	415	608	771	948
7	74	156	225	329	418	516
15	44	92	138	212	282	364
30	29	59	87	131	171	218
60	20	39	54	79	100	124
90	15	28	39	56	71	87

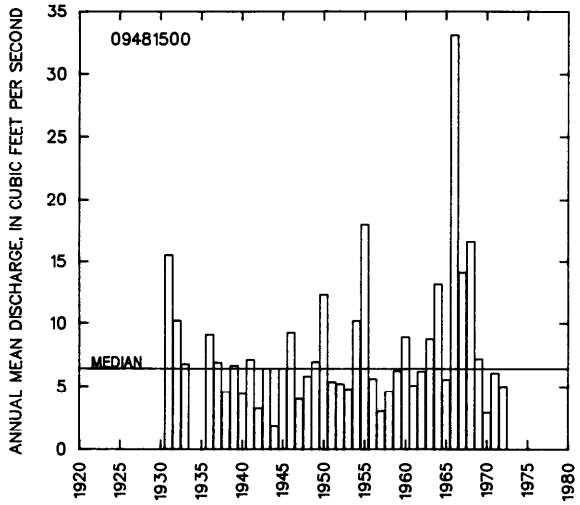
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-33, 1936-72

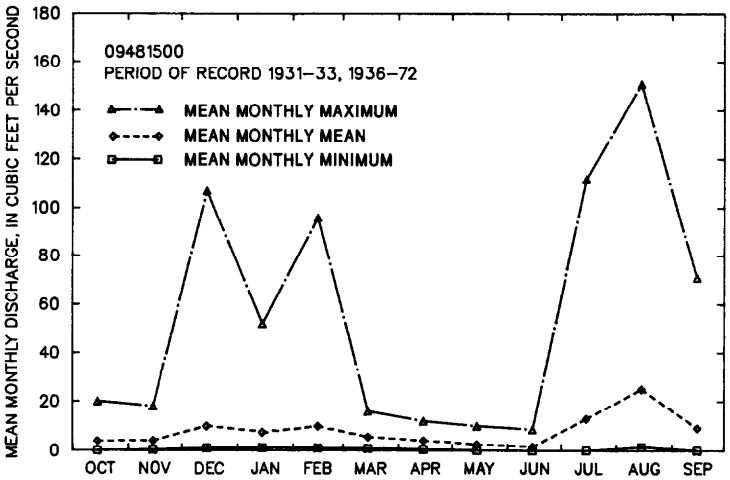
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
115	19	11	8.0	7.1	5.3	4.0	3.2	2.6	2.1	1.2	0.45	0.10	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09481500 SONOITA CREEK NEAR PATAGONIA, AZ--CONTINUED







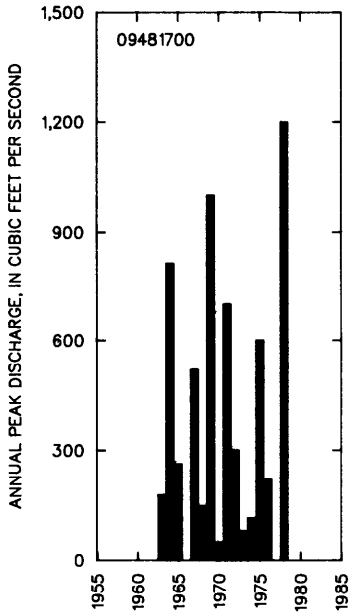
09481700 CALABASAS CANYON NEAR NOGALES, AZ

LOCATION.--Lat 31°27'25", long 110°59'09", in SE¼NW¼ sec.2, T.23 S., R.13 E., Santa Cruz County, Hydrologic Unit 15050301, at U.S. Highway 89, 8.5 mi north of Nogales.

DRAINAGE AREA.--10.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-05-63	179	
1964	07-00-64	813	
1965	07-17-65	263	
1967	07-00-67	520	
1968	12-20-67	150	ES
1969	09-00-69	1,000	
1970	08-08-70	50	LT
1971	08-00-71	700	
1972	07-24-72	300	
1973	10-00-72	80	
1974	08-02-74	115	
1975	07-00-75	600	
1976	00-00-76	220	
1978	10-09-77	1,200	HP



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1978

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
309	691	1,030	1,560	2,020	2,540

WEIGHTED SKEW (LOGS)= -0.21
MEAN (LOGS)= 2.48
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
75.4	11.5	4,360	17.0	3.0	15.8	2.0	4.3

09481750 SOPORI WASH AT AMADO, AZ

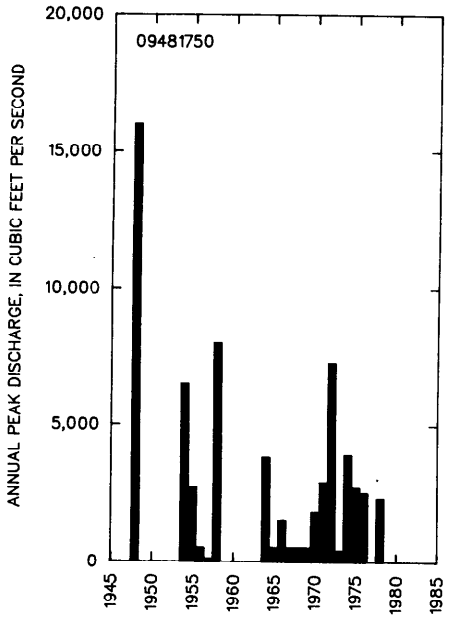
LOCATION.--Lat 31°43'25", long 111°03'40", in NE¼NE¼ sec.1, T.20 S., R.12 E., Santa Cruz County, Hydrologic Unit 15050301, 200 ft below bridge on State Highway 89, 1.1 mi north of Amado.

DRAINAGE AREA.--176 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1948	08-15-48	16,000	HP
1954	00-00-54	6,500	
1955	08-00-55	2,700	
1956	00-00-56	500	ES
1957	00-00-57	100	ES
1958	00-00-58	[1]8,000	
1964	09-10-64	3,800	
1965	00-00-65	500	LT
1966	12-22-65	1,500	
1967	00-00-67	500	LT
1968	00-00-68	500	LT
1969	00-00-69	500	LT
1970	09-04-70	1,800	
1971	09-01-71	2,900	
1972	07-14-72	[2]7,300	
1973	07-00-73	400	
1974	07-23-74	3,900	
1975	08-23-75	2,700	
1976	09-25-76	2,500	
1978	10-00-77	2,300	HP

[1]Highest since 1949.
[2]Highest since 1958.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1948, 1954-58, 1964-76, 1978

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
2,230	4,610	6,780	10,200	13,400	17,100

WEIGHTED SKEW (LOGS)=	0.05
MEAN (LOGS)=	3.35
STANDARD DEV. (LOGS)=	0.37

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
35.9	27.3	3,840	0.3	3.0	15.5	2.2	4.3

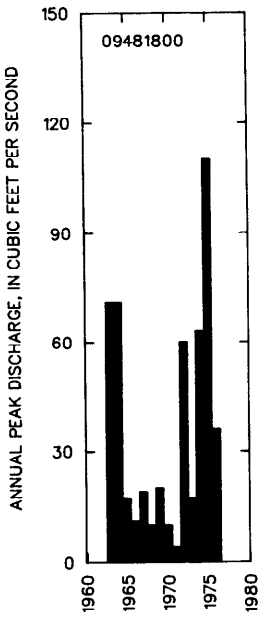
09481800 DEMETRIE WASH TRIBUTARY NEAR CONTINENTAL, AZ

LOCATION.--Lat 31°52'15", long 111°05'15", in SW¼SE¼ sec.11, T.18 S., R.12 E., Pima County, Hydrologic Unit 15050301, at Duval Mine Road, 6.5 mi west of Continental.

DRAINAGE AREA.--0.15 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-08-63	71	
1964	00-00-64	71	
1965	10-00-64	17	
1966	00-00-66	11	
1967	07-17-67	19	
1968	12-15-67	10	
1969	09-00-69	20	
1970	08-00-70	10	
1971	07-00-71	4.0	ES
1972	00-00-72	60	
1973	07-00-73	17	
1974	00-00-74	63	
1975	09-07-75	110	
1976	09-25-76	36	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
25.6	56.9	85.2	130	169	214

WEIGHTED SKEW (LOGS)=	-0.15
MEAN (LOGS)=	1.40
STANDARD DEV. (LOGS)=	0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
100	0.80	3,620	0.0	1.0	14.5	2.3	4.7

09481900 OCOTILLO WASH NEAR CONTINENTAL, AZ

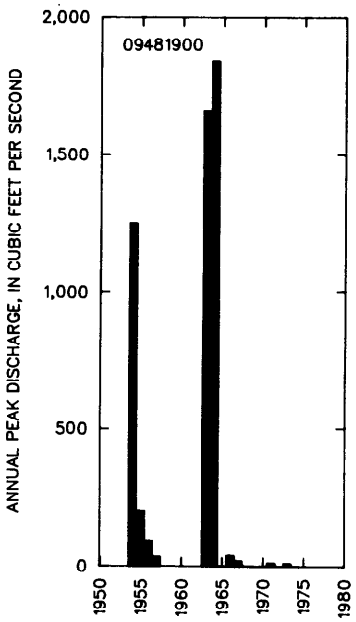
LOCATION.--Lat 31°50'00", long 111°00'00", in SE¼ sec.27, T.18 S., R.13E. (unsurveyed), Pima County, Hydrologic Unit 15050301, in Spanish Land Grant of San Ignacio de la Canoa at U.S. Highway 89, 1.5 mi southwest of Continental.

DRAINAGE AREA.--3.60 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1954	07-20-54	1,250	
1955	00-00-55	200	ES
1956	00-00-56	90	ES
1957	00-00-57	35	ES
1963	08-05-63	[1]1,660	
1964	07-00-64	[1]1,840	
1965	00-00-65	0	
1966	00-00-66	40	ES
1967	00-00-67	20	ES
1968	12-00-67	1.0	LT
1969	00-00-69	0	
1970	00-00-70	0	KR
1971	08-00-71	12	KR
1972	00-00-72	0	KR
1973	00-00-73	10	ES,KR
1974	00-00-74	0	KR

[1]Highest since 1954.
[2]Highest since 1954.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ---
STANDARD DEV. (LOGS)= ---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
106	5.99	3,280	0.0	3.0	14.1	2.1	4.6

09482000 SANTA CRUZ RIVER AT CONTINENTAL, AZ

LOCATION.--Lat 31°52'17", long 110°58'46", in SE¼SE¼ sec.11, T.18 S., R.13 E. (unsurveyed), Pima County, Hydrologic Unit 15050301, in Spanish land grant of San Ignacio de la Canoa, on right bank 0.8 mi northeast of Green Valley Post Office, and 1.5 mi north of Continental. Prior to Feb. 13, 1981, at site 1.5 mi upstream.

DRAINAGE AREA.--1,682 mi^2, revised, of which 395 mi^2 is in Mexico.

REMARKS.--Irrigation above station of about 12,500 acres including about 2,300 acres in Mexico, mostly by pumping from ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1940	08-14-40	12,100	1967	07-27-67	3,730
1941	08-09-41	3,670	1968	12-20-67	18,000
1942	07-28-42	2,700	1969	08-05-69	1,680
1943	08-01-43	4,000	1970	07-20-70	3,720
1944	08-12-44	4,440	1971	08-20-71	3,270
1945	08-09-45	7,820	1972	07-14-72	3,290
1946	09-09-46	4,120	1973	03-14-73	2,130
1947	10-01-46	5,330	1974	09-03-74	3,450
1952	08-15-52	1,820	1975	09-01-75	3,350
1953	07-14-53	4,910	1976	07-12-76	3,800
1954	08-05-54	14,600	1977	07-18-77	3,290
1955	08-19-55	17,500	1978	10-09-77	26,500
1956	07-29-56	3,090	1979	12-18-78	16,000
1957	08-21-57	1,690	1980	08-25-80	2,360
1958	08-05-58	5,620	1981	09-05-81	3,350
1959	08-17-59	3,900	1982	08-15-82	2,160
1960	01-12-60	3,740	1983	02-04-83	4,800
1961	08-23-61	4,820	1984	10-02-83	[1]45,000
1962	01-25-62	2,480	1985	12-28-84	11,600
1963	08-06-63	4,220	1986	07-16-86	840
1964	09-10-64	14,000	1987	08-05-87	340
1965	09-12-65	370	1988	07-28-88	930
1966	12-23-65	5,990	1989	09-03-89	1,200

[1]Highest since 1892.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
21.0	99.2	4,350	22.0	2.0	18.1	2.1	4.3

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-46, 1952-80

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	755	0.00	24	127	5.3	9.1
NOVEMBER	133	0.00	3.9	22	5.7	1.5
DECEMBER	658	0.00	47	155	3.3	18.0
JANUARY	565	0.00	24	100	4.2	9.1
FEBRUARY	207	0.00	11	38	3.4	4.3
MARCH	132	0.00	8.5	30	3.6	3.2
APRIL	0.12	0.00	0.00	0.02	5.9	0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	6.2	0.00	0.44	1.3	3.0	0.2
JULY	227	0.13	36	48	1.3	13.7
AUGUST	753	0.00	88	147	1.7	33.6
SEPTEMBER	285	0.00	19	48	2.5	7.3
ANNUAL	116	0.26	22	29	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1942-46, 1953-80

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.06	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1940-47, 1952-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,980	8,140	12,300	19,600	27,000	36,500

WEIGHTED SKEW (LOGS)= 0.48
MEAN (LOGS)= 3.63
STANDARD DEV. (LOGS)= 0.35

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-46, 1952-80

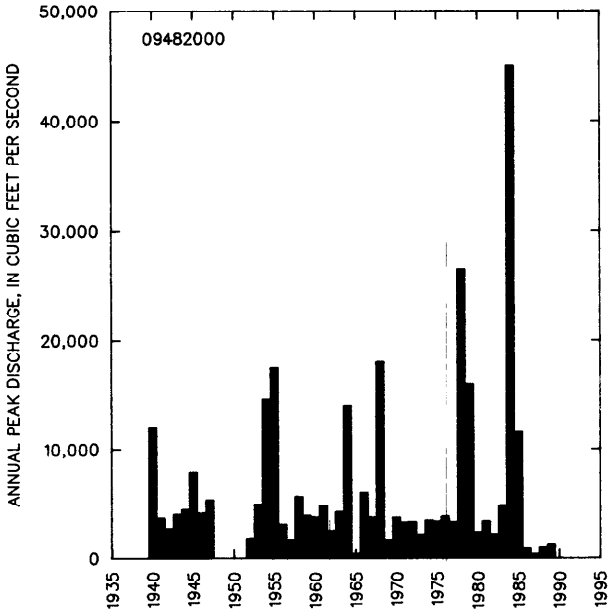
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	936	2,790	4,940	9,080	13,500	19,200
3	489	1,480	2,630	4,850	7,190	10,200
7	260	788	1,390	2,550	3,750	5,290
15	158	466	799	1,390	1,970	2,670
30	107	297	482	783	1,050	1,350
60	63	174	282	459	616	795
90	44	120	196	320	432	561

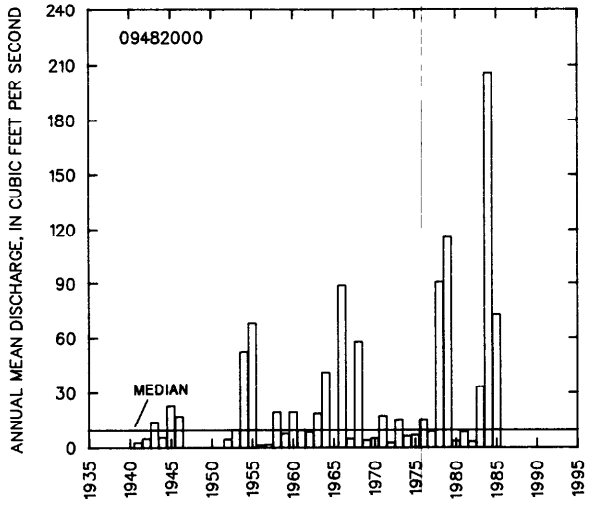
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-46, 1952-80

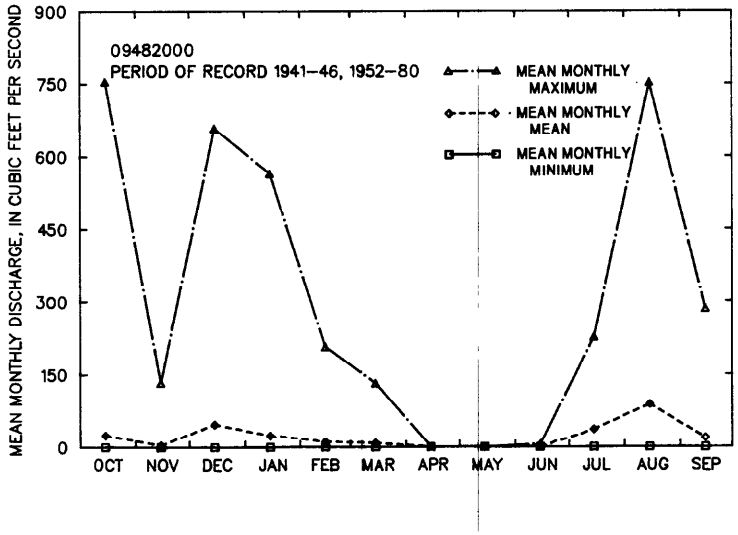
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
525	37	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09482000 SANTA CRUZ RIVER AT CONTINENTAL, AZ--CONTINUED







09482200 FLATO WASH NEAR SAHUARITA, AZ

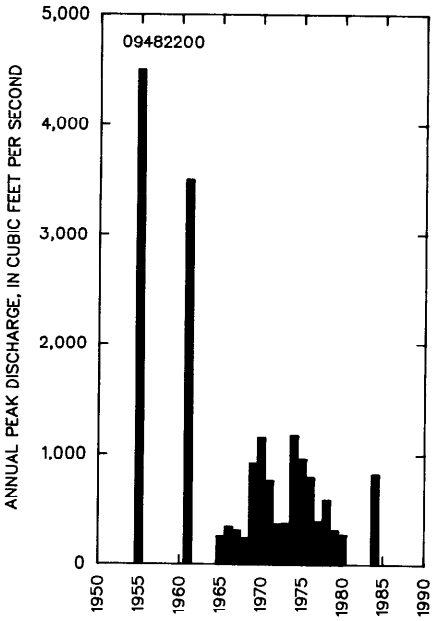
LOCATION.--Lat 32°02'43", Long 110°57'00", in SW¼SE¼ sec.7, T.16 S., R.14 E., Pima County, Hydrologic Unit 15050301, at U.S. Highway 89, 6 mi north of Sahuarita.

DRAINAGE AREA.--30.1 mi^2 of which 23.4 mi^2 is noncontributing and/or distributary flow.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1955	00-00-55	[1]4,500	HP
1961	00-00-61	[2]3,500	HP
1965	08-30-65	250	
1966	08-19-66	340	
1967	07-17-67	307	
1968	02-12-68	230	
1969	08-07-69	913	
1970	07-21-70	1,150	
1971	08-08-71	760	
1972	09-12-72	365	
1973	10-19-72	370	
1974	07-07-74	1,170	
1975	09-07-75	960	
1976	09-25-76	790	
1977	07-22-77	390	
1978	08-01-78	580	
1979	08-15-79	310	
1980	08-13-80	271	
1984	10-01-83	[3]820	HP

[1]Highest since 1928.
[2]Highest since 1955.
[3]Highest since 1980.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	-----	-----	-----	-----
WEIGHTED SKEW (LOGS)= ----					
MEAN (LOGS)= ----					
STANDARD DEV. (LOGS)= ----					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
40.4	8.8	2,770	0.0	3.0	11.6	1.9	4.3

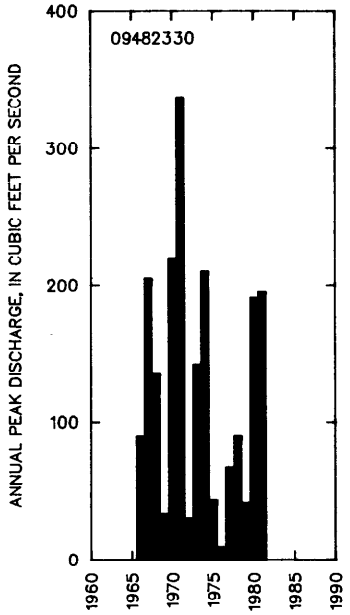
09482330 PUMPING WASH NEAR VAIL, AZ

LOCATION.--Lat 32°04'10", long 110°48'23", in SW¼NW¼ sec.3, T.16 S., R.15 E., Pima County, Hydrologic Unit 15050301, at road to pumping station 1.1 mi south of Interstate 10, and 5.7 mi west of Vail.

DRAINAGE AREA.--0.81 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	08-16-66	90
1967	07-17-67	205
1968	00-00-68	135
1969	08-07-69	33
1970	08-00-70	220
1971	07-00-71	337
1972	07-17-72	30
1973	10-05-72	142
1974	07-07-74	210
1975	07-00-75	43
1976	09-25-76	9.0
1977	10-22-76	67
1978	10-06-77	90
1979	12-18-78	41
1980	08-24-80	190
1981	07-25-81	195



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
102	198	274	382	469	560

WEIGHTED SKEW (LOGS)= -0.31
MEAN (LOGS)= 1.99
STANDARD DEV. (LOGS)= 0.36

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
57.7	2.3	3,010	0.0	1.0	11.2	1.8	3.9

09482350 SOUTH FORK ARIPORT WASH NEAR TUCSON, AZ

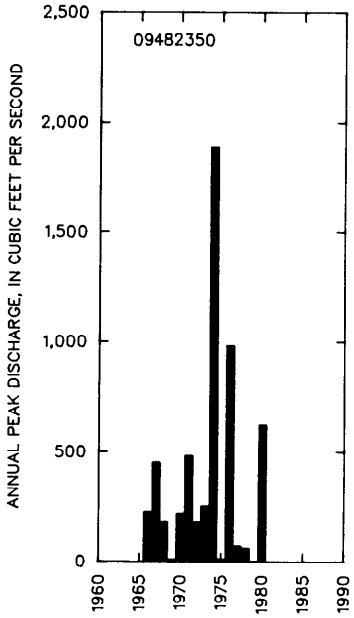
LOCATION.--Lat 32°06'00", long 110°54'30", in SE¼NE¼ sec.28, T.15 S., R.14 E., Pima County, Hydrologic Unit 15050301, at Hughes Access Road, 3.25 mi south of U.S. Highway 80, and 1.5 mi southeast of Tucson city limits.

DRAINAGE AREA.--9.78 mi^2, of which 5.40 mi^2 is noncontributing and/or distributary flow.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	07-28-66	225	
1967	07-17-67	450	
1968	08-19-68	180	
1969	07-28-69	8.0	
1970	07-19-70	216	
1971	10-02-70	480	
1972	08-12-72	180	
1973	10-19-72	250	
1974	07-08-74	[1]1,890	
1975	07-00-75	10	LT
1976	09-25-76	980	
1977	01-29-77	69	
1978	01-15-78	59	
1979	00-00-79	0.0	
1980	09-07-80	620	

[1]Highest since 1956.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	-----	-----	-----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
36.5	3.1	2,740	0.0	1.0	11.0	1.8	3.9

GILA RIVER BASIN

09482370 NORTH FORK AIRPORT WASH NEAR TUCSON, AZ

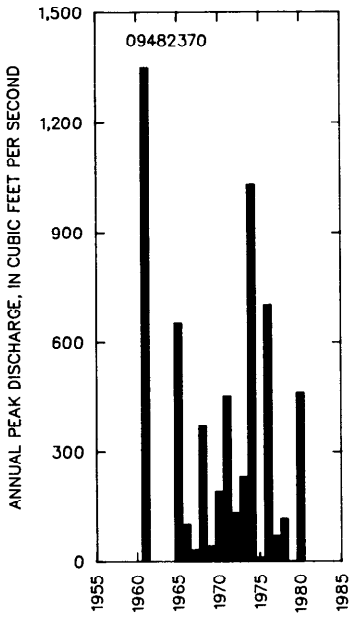
LOCATION.--Lat 32°06'40", long 110°54'30", in NE¼SE¼ sec.21, T.15 S., R.14 E., Pima County, Hydrologic Unit 15050301, at Hughes Access Road, 2.5 mi south of U.S. Highway 80, and 1 mi east of Tucson city limits.

DRAINAGE AREA.--6.65 mi^2, of which 1.37 mi^2 is noncontributing and/or distributary flow.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1961	08-22-61	[1]1,350	HP
1965	00-00-65	[2]650	
1966	07-28-66	100	ES
1967	07-17-67	30	ES
1968	08-19-68	370	
1969	09-15-69	40	
1970	07-19-70	190	
1971	10-02-70	450	
1972	08-12-72	130	
1973	10-19-72	230	
1974	07-08-74	[1]1,030	
1975	07-12-75	10	LT
1976	09-25-76	700	
1977	11-11-76	70	
1978	01-15-78	115	
1979	00-00-79	0	
1980	09-07-80	460	

[1]Highest since 1956.
[2]Highest since 1961.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
40.6	4.6	2,780	3.0	1.0	10.8	1.8	3.9

09482400 AIRPORT WASH AT TUCSON, AZ

LOCATION.--Lat 32°09'09", long 110°58'52", in NE¼SE¼ sec.2, T.15 S., R.13 E., Pima County, Hydrologic Unit 15050301, 25 ft upstream from Santa Clara Avenue, 0.7 mi upstream from mouth, 4.3 mi downstream from confluence of north and south forks of Airport Wash, and 4.9 mi south of city hall in Tucson.

DRAINAGE AREA.--23.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	09-11-66	322	C
1967	07-17-67	106	C
1968	08-20-68	385	C
1969	08-28-69	118	C
1970	07-20-70	823	C
1971	10-02-70	549	C
1972	07-16-72	310	C
1973	10-19-72	159	C
1974	07-07-74	689	C
1975	07-12-75	377	C
1976	09-25-76	896	C
1977	09-09-77	304	C
1978	09-21-78	405	C
1979	10-21-78	279	C
1980	09-07-80	378	C
1981	07-27-81	385	C
1984	10-01-83	2,900	HP,C

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
37.0	10.8	2,700	1.1	1.0	10.8	1.8	3.9

09482400 AIRPORT WASH AT TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-81

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	3.4	0.00	0.54	1.1	2.0	10.6
NOVEMBER	0.67	0.00	0.10	0.20	2.0	2.0
DECEMBER	0.97	0.00	0.19	0.32	1.7	3.7
JANUARY	0.53	0.00	0.09	0.18	2.0	1.7
FEBRUARY	1.4	0.00	0.13	0.35	2.7	2.6
MARCH	0.41	0.00	0.06	0.12	1.8	1.2
APRIL	0.24	0.00	0.02	0.06	3.0	0.4
MAY	0.05	0.00	0.00	0.01	3.4	0.1
JUNE	0.19	0.00	0.01	0.05	3.8	0.2
JULY	9.4	0.00	1.9	2.7	1.4	38.0
AUGUST	3.0	0.00	0.81	0.80	0.98	16.0
SEPTEMBER	6.0	0.00	1.2	1.8	1.5	23.5
ANNUAL	1.1	0.08	0.43	0.31	0.72	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-81

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.11	0.03	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
403	666	889	1,230	1,540	1,900

WEIGHTED SKEW (LOGS)= 0.47
MEAN (LOGS)= 2.63
STANDARD DEV. (LOGS)= 0.25

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-81

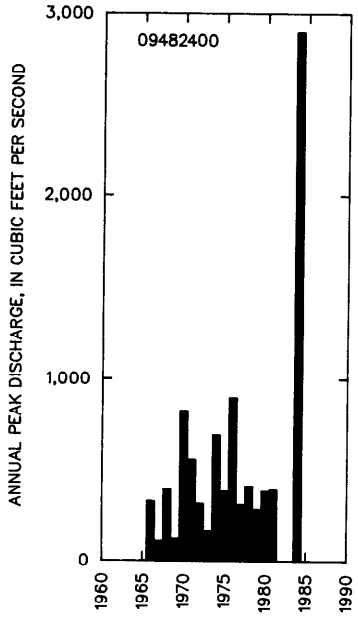
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	41	81	118	176	229	291
3	17	38	58	92	124	162
7	7.8	17	27	42	57	74
15	3.9	8.7	13	20	27	35
30	2.5	5.3	7.8	12	15	19
60	1.5	3.1	4.6	7.0	9.1	11
90	1.0	2.1	3.1	4.6	6.0	7.6

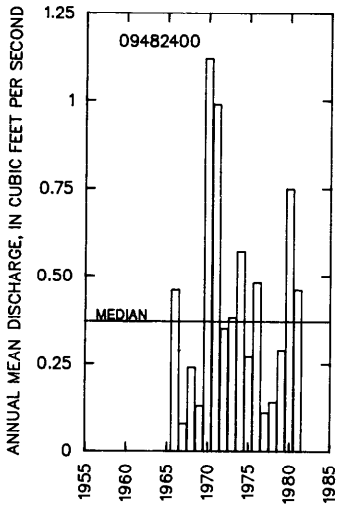
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-81

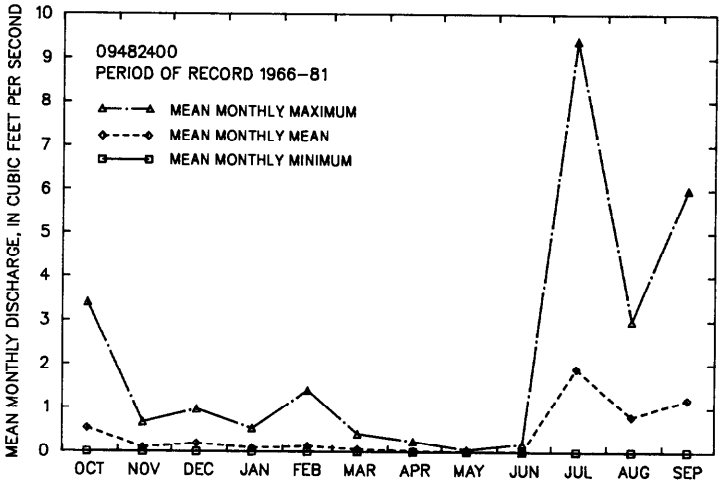
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
9.3	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09482400 AIRPORT WASH AT TUCSON, AZ--CONTINUED







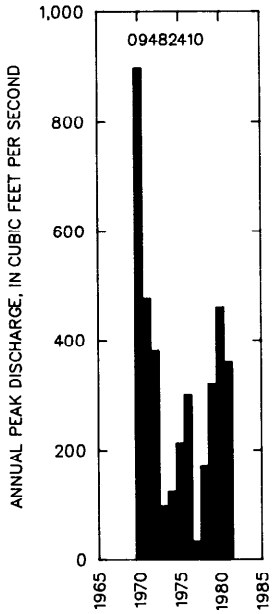
09482410 RODEO WASH AT TUCSON, AZ

LOCATION.--Lat 32°10'20", long 110°58'35", in SW¼NW¼ sec.36, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, at South 12th Avenue, 0.8 mi above mouth in Tucson city limits.

DRAINAGE AREA.--7.24 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	07-20-70	898	C
1971	08-19-71	476	C
1972	07-16-72	380	C
1973	07-00-73	97	C
1974	07-21-74	125	C
1975	07-12-75	212	C
1976	00-00-76	300	C
1977	08-15-77	32	C
1978	10-06-77	170	C
1979	08-12-79	320	C
1980	09-07-80	460	C
1981	07-29-81	360	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1970-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
260	441	572	746	880	1,020

WEIGHTED SKEW (LOGS)=	-0.27
MEAN (LOGS)=	2.40
STANDARD DEV. (LOGS)=	0.28

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
33.7	7.9	2,560	0.0	1.0	10.6	1.9	4.2

GILA RIVER BASIN

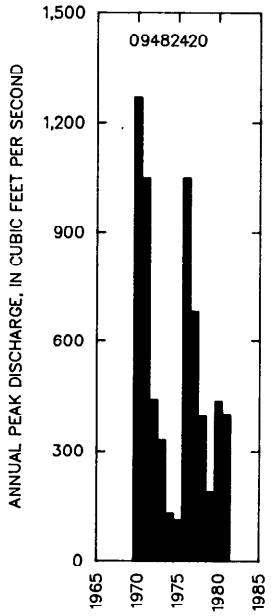
09482420 JULIAN WASH AT TUCSON, AZ

LOCATION.--Lat 32°10'15", long 110°56'25", in SW¼NW¼ sec.32, T.14 S., R.14 E., Pima County, Hydrologic Unit 15050302, 1,600 ft above confluence with Tucson Diversion channel, and 0.5 mi south of Ajo Road in Tucson.

DRAINAGE AREA.--26.5 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1970	07-19-70	1,270
1971	08-20-71	1,050
1972	07-16-72	440
1973	10-19-72	330
1974	07-07-74	130
1975	07-12-75	112
1976	09-25-76	1,050
1977	09-09-77	680
1978	10-06-77	395
1979	07-29-79	190
1980	09-07-80	435
1981	03-02-81	400



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1970-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
428	817	1,130	1,570	1,930	2,310

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 2.62
STANDARD DEV. (LOGS)= 0.34

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
38.9	17.3	2,900	1.9	1.0	11.0	1.7	4.0

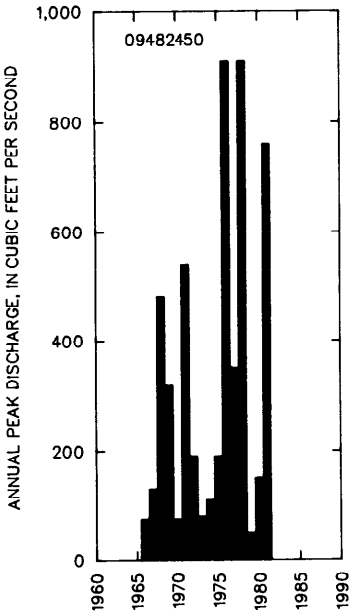
09482450 WEST BRANCH SANTA CRUZ RIVER AT TUCSON, AZ

LOCATION.--Lat 32°08'00", long 111°00'30", in NE¼NE¼ sec.16, T.15 S., R.13 E., Pima County, Hydrologic Unit 15050301, at Valencia Road, 0.4 mi west of Tucson city limits.

DRAINAGE AREA.--23.6 mi^2, contributing drainage area not determined.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	08-19-66	75	ES
1967	07-17-67	130	ES
1968	08-10-68	480	
1969	08-08-69	318	
1970	07-19-70	75	ES
1971	08-17-71	540	
1972	07-16-72	190	
1973	08-23-73	80	
1974	06-25-74	110	
1975	09-09-75	190	
1976	09-25-76	910	
1977	09-09-77	350	
1978	10-06-77	910	
1979	12-18-78	50	
1980	09-25-80	150	
1981	07-29-81	760	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
80.9	15.3	2,800	0.3	3.0	11.2	2.1	4.4

GILA RIVER BASIN

09482480 BIG WASH AT TUCSON, AZ

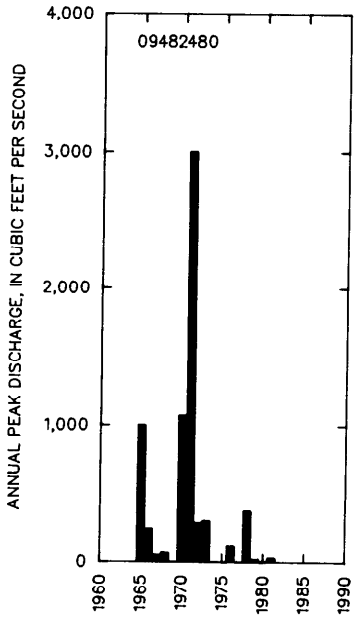
LOCATION.--Lat 32°11'10", long 111°00'07", in SW¼NE¼ sec.27, T.14 S., R.13 E., Pima County, at Mission Road, 0.6 mi north of State Highway 86, in Tucson.

DRAINAGE AREA.--2.94 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	07-10-65	1,000	ES
1966	08-12-66	240	
1967	07-17-67	50	
1968	08-10-68	65	
1969	00-00-69	0	
1970	07-19-70	[1]1,070	
1971	08-17-71	[2]3,000	
1972	07-16-72	285	
1973	07-00-73	300	ES
1974	00-00-74	0	
1975	00-00-75	0	
1976	09-25-76	120	
1977	00-00-77	0	
1978	10-06-77	380	
1979	08-12-79	20	
1980	09-07-80	3.0	
1981	09-18-81	29	

[1]Highest since 1963.
[2]Highest since 1920.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
63.0	390	887	1,940	3,060	4,460

WEIGHTED SKEW (LOGS)= -0.62
MEAN (LOGS)= 1.69
STANDARD DEV. (LOGS)= 1.05

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
95.2	4.9	2,850	0.0	1.0	11.0	1.9	4.4

09482500 SANTA CRUZ RIVER AT TUCSON, AZ

LOCATION.--Lat 32°13'16", long 110°58'52", in NE¼NE¼ sec.14, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, on downstream side of center pier of Congress Street Bridge in Tucson.

DRAINAGE AREA.--2,222 mi^2, of which 395 mi^2 is in Mexico, adjusted for 15.2 mi^2 of Tucson Arroyo drainage area contributing to this station effective July 1956.

REMARKS.--Irrigation above station of about 26,000 acres, including about 2,300 acres in Mexico, mostly by pumping from ground water. Ground water is also pumped above the station for municipal supply and mining. Since October 1969 all flow past station is published, including wastewater when known.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1915	12-23-14	[1]15,000		1952	08-16-52	3,820	
1916	01-20-16	5,000		1953	07-15-53	5,900	
1917	09-08-17	7,500		1954	07-24-54	9,570	
1918	08-07-18	4,900		1955	08-03-55	10,900	
1919	08-02-19	4,700		1956	07-29-56	2,610	
1920	08-09-20	1,950		1957	08-31-57	3,050	
1921	08-01-21	4,000		1958	07-29-58	6,350	
1922	07-20-22	2,000		1959	08-20-59	4,420	
1923	08-17-23	1,900		1960	08-10-60	6,140	
1924	11-17-23	2,050		1961	08-23-61	16,600	
1925	09-18-25	3,400		1962	09-26-62	4,980	
1926	09-28-26	11,400		1963	08-26-63	4,670	
1927	09-07-27	1,950		1964	09-10-64	13,000	
1928	08-01-28	1,600		1965	07-16-65	1,190	
1929	09-24-29	10,400		1966	08-19-66	5,500	
1930	08-07-30	1,770		1967	07-17-67	5,860	
1931	08-10-31	9,200		1968	12-20-67	16,100	
1932	07-30-32	4,200		1969	08-06-69	8,710	
1933	08-21-33	6,100		1970	07-20-70	8,530	
1934	08-23-34	6,000		1971	08-17-71	8,000	
1935	09-01-35	10,300		1972	07-15-72	3,470	
1936	07-26-36	5,400		1973	10-19-72	4,710	
1937	07-10-37	3,280		1974	07-08-74	7,930	
1938	08-05-38	9,000		1975	07-12-75	2,480	
1939	08-03-39	8,000		1976	09-25-76	7,100	
1940	08-14-40	11,300		1977	08-15-77	2,660	
1941	08-14-41	2,490		1978	10-10-77	23,700	
1942	08-09-42	1,670		1979	12-19-78	13,500	
1943	08-02-43	4,510		1980	08-13-80	2,760	
1944	08-16-44	6,530		1981	07-27-81	2,700	
1945	08-10-45	10,800		1984	10-02-83	[2]52,700	
1946	08-04-46	4,260		1985	12-28-84	10,000	
1947	10-01-46	2,960		1986	07-21-86	1,920	HP
1948	08-16-48	3,860		1987	08-02-87	1,500	
1949	08-08-49	3,800		1988	08-23-88	10,700	
1950	07-30-50	9,490		1989	10-20-88	2,960	
1951	08-02-51	5,020					

[1]Highest since 1905.

[2]Highest since 1892.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
20.1	128	4,050	17.0	2.0	16.9	2.1	4.2

09482500 SANTA CRUZ RIVER AT TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1906, 1913, 1915-81

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	656	0.00	13	79	5.9	4.9
NOVEMBER	215	0.00	6.6	28	4.3	2.4
DECEMBER	895	0.00	36	146	4.1	13.0
JANUARY	518	0.00	22	82	3.8	7.8
FEBRUARY	202	0.00	11	37	3.3	4.1
MARCH	102	0.00	4.9	18	3.6	1.8
APRIL	1.7	0.00	0.11	0.29	2.7	0.0
MAY	2.3	0.00	0.09	0.34	3.8	0.0
JUNE	25	0.00	1.4	4.3	3.1	0.5
JULY	430	0.00	52	71	1.4	18.8
AUGUST	682	0.00	95	114	1.2	34.5
SEPTEMBER	312	0.00	33	60	1.8	12.1
ANNUAL	112	1.3	23	23	0.99	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1916-81

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.12	0.00	0.00	0.00	0.00	0.00
183	0.76	0.08	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1915-81, 1984-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,090	9,400	13,100	18,800	23,800	29,600

WEIGHTED SKEW (LOGS)= 0.15
MEAN (LOGS)= 3.71
STANDARD DEV. (LOGS)= 0.31

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906, 1913, 1915-81

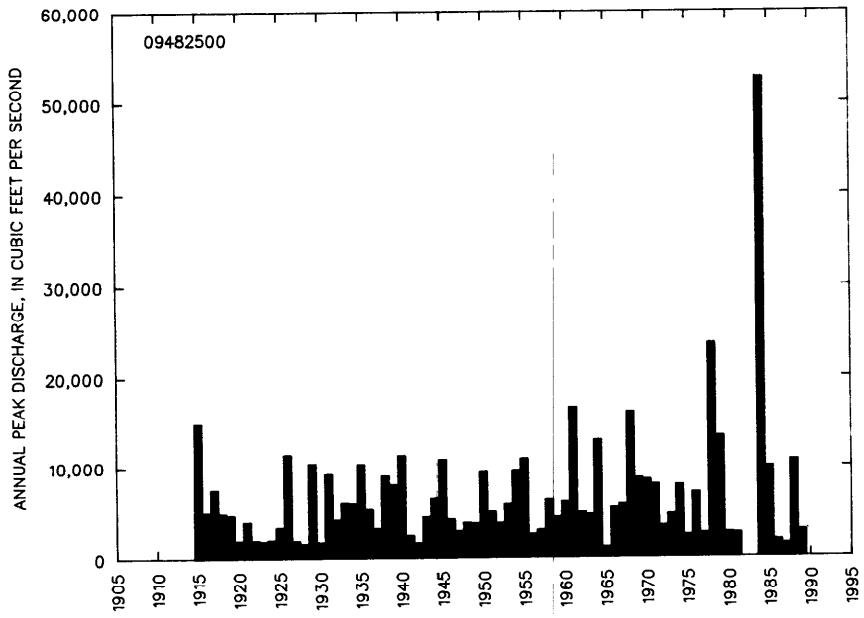
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,430	3,260	4,900	7,410	9,580	12,000
3	714	1,660	2,510	3,800	4,900	6,120
7	370	866	1,310	2,010	2,610	3,290
15	214	491	738	1,120	1,450	1,810
30	133	296	438	655	842	1,050
60	80	176	264	405	531	678
90	57	124	185	282	370	472

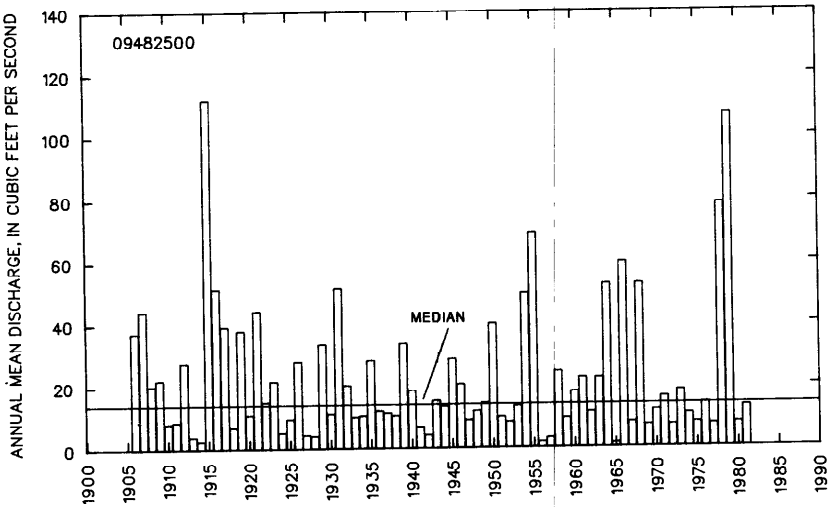
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906, 1913, 1915-81

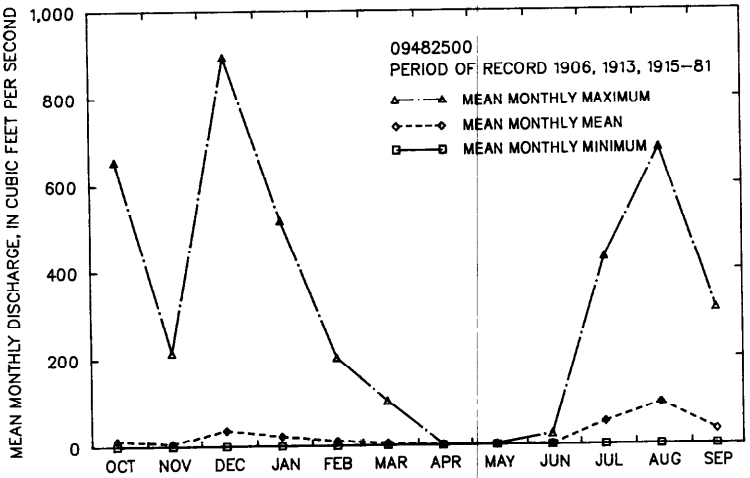
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
539	50	5.8	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09482500 SANTA CRUZ RIVER AT TUCSON, AZ--CONTINUED







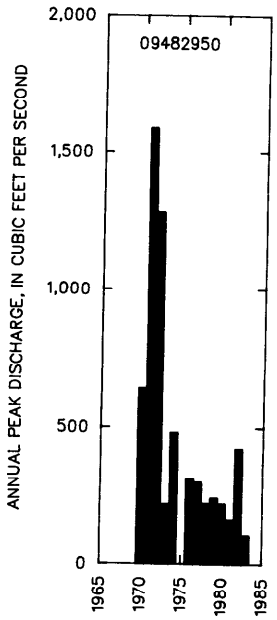
09482950 RAILROAD WASH AT TUCSON, AZ

LOCATION.--Lat 32°12'50", long 110°56'45", in NE¼SE¼ sec.18, T.14 S., R.14 E., Pima County, Hydrologic Unit 15050301, on center of culvert on upstream side of Winsett Street in Tucson. Prior to December 11, 1978, at site 200 ft upstream.

DRAINAGE AREA.--2.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	07-20-70	642	C
1971	07-19-71	1,590	C
1972	08-12-72	1,280	C
1973	07-27-73	220	C
1974	07-18-74	482	C
1976	07-11-76	312	C
1977	09-10-77	300	C
1978	10-06-77	223	C
1979	10-21-78	243	C
1980	08-23-80	222	C
1981	06-25-81	162	C
1982	07-25-82	421	C
1983	01-29-83	106	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1970-74, 1976-79, 1981-83

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
340	666	961	1,440	1,870	2,390

WEIGHTED SKEW (LOGS)= 0.19
MEAN (LOGS)= 2.54
STANDARD DEV. (LOGS)= 0.34

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
0.73	2.7	2,490	0.0	1.0	11.0	1.7	4.2

09483000 TUCSON ARROYO AT VINE AVENUE, TUCSON, AZ

LOCATION.--Lat 32°13'00", long 110°56'54", in SW¼NE¼ sec.18, T.14 S., R.14 E., Pima County, Hydrologic Unit 15050301, on right bank at Vine Avenue in Tucson, 0.2 mi downstream from Arroyo Chico.

DRAINAGE AREA.--8.2 mi^2 since June 1956. Prior to August 1945, 27.0 mi^2. See WSP 1733 for history of progressive reduction of drainage area by flood-control diversion structures.

REMARKS.--A flood-control project, at upper end of natural basin, diverts runoff from 3.6 mi into Lakeside Reservoir (Atterbury), which is in Pantano Wash drainage area. Another flood-control project diverts runoff from 15.2 mi near the upper end of basin into a flood-control detention reservoir in SE¼ sec.29, T.14 S., R.14 E., from which reservoir water is released to Julian Wash, which enters Santa Cruz River upstream from Tucson Arroyo. Since October 1969, all flow past the station is published.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1956	08-26-56	364	C
1957	07-17-57	716	C
1959	08-20-59	2,540	C
1960	08-20-60	609	C
1961	08-22-61	[1]5,000	UR,C
1962	09-26-62	1,060	C
1963	09-03-63	208	C
1964	08-12-64	1,060	C
1965	07-16-65	1,220	C
1966	09-13-66	593	C
1967	05-24-67	350	C
1968	08-19-68	644	C
1969	08-01-69	800	C
1970	07-20-70	1,550	C
1971	07-19-71	2,930	C
1972	08-12-72	2,950	C
1973	10-18-72	720	C
1974	07-18-74	332	C
1975	07-25-75	760	C
1976	09-04-76	446	C
1977	09-10-77	1,480	C
1978	10-06-77	764	C
1979	10-21-78	1,040	C
1980	08-13-80	816	C
1981	06-25-81	746	C

[1]Highest since 1940.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
37.0	5.5	2,510	0.0	1.0	11.0	1.8	3.9

09483000 TUCSON ARROYO AT VINE AVE, TUCSON, AZ--Continued.

MEAN MONTHLY AND ANNUAL DISCHARGES 1957-81

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	8.7	0.00	1.1	2.0	1.8	9.8
NOVEMBER	4.4	0.00	0.53	0.95	1.8	4.9
DECEMBER	8.5	0.00	1.1	2.1	1.8	10.5
JANUARY	3.8	0.00	0.75	1.1	1.5	6.9
FEBRUARY	3.8	0.00	0.72	1.1	1.5	6.6
MARCH	2.0	0.00	0.47	0.63	1.3	4.4
APRIL	0.47	0.00	0.09	0.13	1.4	0.9
MAY	1.0	0.00	0.10	0.23	2.2	1.0
JUNE	1.3	0.00	0.12	0.28	2.3	1.1
JULY	4.9	0.09	1.9	1.3	0.70	17.8
AUGUST	15	0.00	2.8	3.9	1.4	25.9
SEPTEMBER	5.7	0.00	1.1	1.5	1.3	10.4
ANNUAL	1.8	0.36	0.91	0.46	0.50	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1958-81

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.16	0.02	0.00	0.00	0.00	0.00
183	0.36	0.16	0.10	0.06	0.04	0.03

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1956-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
842	1,540	2,150	3,090	3,920	4,890

WEIGHTED SKEW (LOGS)= 0.20
MEAN (LOGS)= 2.93
STANDARD DEV. (LOGS)= 0.31

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1957-81

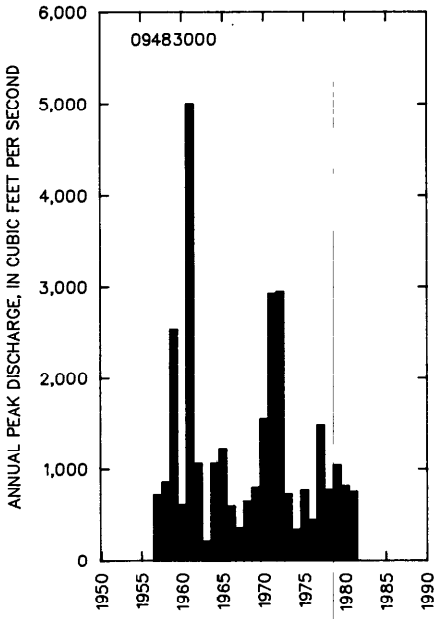
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	67	125	177	262	342	438
3	27	48	68	100	129	165
7	13	23	33	48	62	78
15	7.1	13	18	25	32	40
30	4.5	7.9	11	15	18	21
60	2.8	4.8	6.5	9.0	11	14
90	2.1	3.6	4.7	6.4	7.9	9.6

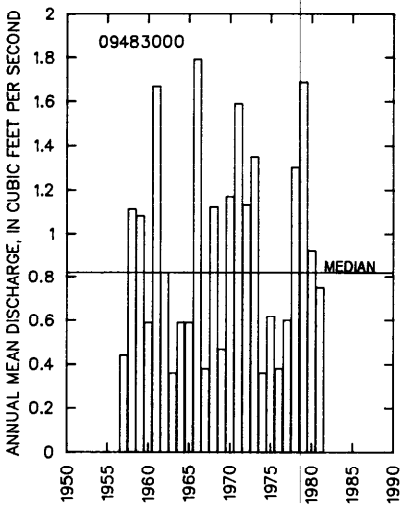
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-81

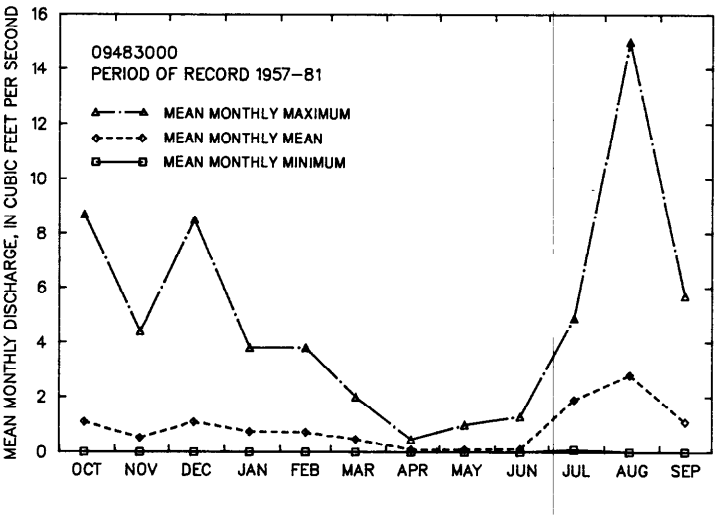
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
25	2.0	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09483000 TUCSON ARROYO AT VINE AVE, TUCSON, AZ--CONTINUED







09483010 HIGH SCHOOL WASH AT TUCSON, AZ

LOCATION.--Lat 32°13'28", long 110°56'48", in SE¼SE¼ sec.7, T.14 S., R.14 E., Pima County, Hydrologic Unit 15050301, on right bank 200 ft upstream from Cherry Avenue in Tucson.

DRAINAGE AREA.--0.95 mi^2.

REMARKS.--Entire drainage basin is an urban residential area.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1968	08-10-68	486	C
1969	08-01-69	341	C
1970	08-11-70	409	C
1971	08-08-71	664	C
1972	08-12-72	800	C
1973	07-07-73	204	C
1974	08-02-74	126	C
1975	07-16-75	195	C
1976	09-04-76	156	C
1977	07-22-77	129	C
1978	10-07-77	178	C
1979	08-12-79	346	C
1980	08-13-80	357	C
1981	05-01-81	85	C
1982	07-25-82	464	C
1983	08-16-83	153	C

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
1.11	1.6	2,460	0.0	1.0	11.0	1.7	4.2

09483010 HIGH SCHOOL WASH AT TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1974-83

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.38	0.00	0.10	0.16	1.5	8.0
NOVEMBER	0.20	0.00	0.05	0.07	1.4	4.0
DECEMBER	0.35	0.00	0.07	0.11	1.5	5.7
JANUARY	0.28	0.00	0.12	0.11	0.92	9.5
FEBRUARY	0.31	0.00	0.07	0.12	1.6	5.6
MARCH	0.26	0.00	0.09	0.07	0.78	7.1
APRIL	0.10	0.00	0.02	0.03	2.0	1.2
MAY	0.10	0.00	0.02	0.03	1.9	1.4
JUNE	0.09	0.00	0.02	0.03	1.5	1.5
JULY	0.57	0.04	0.23	0.19	0.81	17.8
AUGUST	0.82	0.01	0.27	0.30	1.1	20.9
SEPTEMBER	0.78	0.00	0.22	0.24	1.1	17.4
ANNUAL	0.20	0.05	0.11	0.05	0.43	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-83

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.02	0.01	0.00	0.00	0.00	0.00
183	0.05	0.02	0.02	0.01	0.01	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1968-83

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
261	454	606	827	1010	1210

WEIGHTED SKEW (LOGS)= 0.22
MEAN (LOGS)= 2.42
STANDARD DEV. (LOGS)= 0.28

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-83

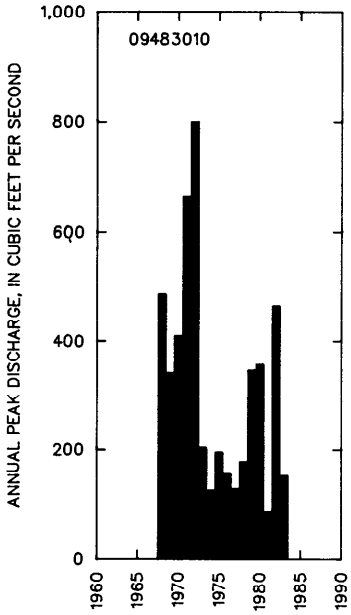
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	6.0	10	14	20	25	31
3	2.6	4.6	6.3	9.0	11	14
7	1.3	2.2	2.9	4.0	4.9	5.8
15	0.72	1.2	1.5	2.0	2.3	2.8
30	0.43	0.72	0.98	1.4	1.8	2.3
60	0.30	0.52	0.72	1.0	1.4	1.7
90	0.25	0.41	0.53	0.71	0.86	1.0

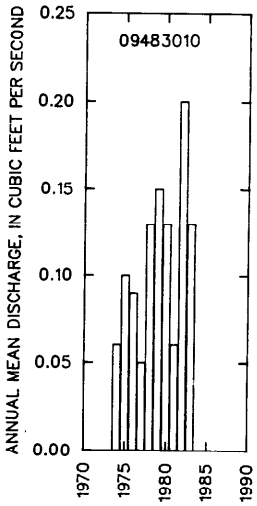
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-83

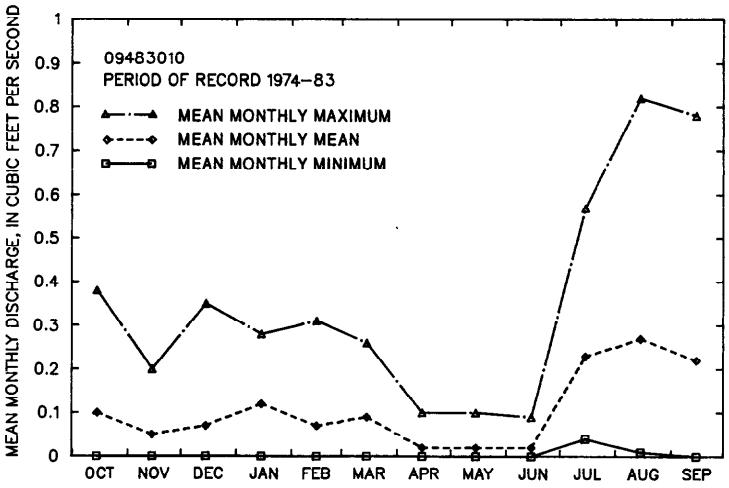
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3.0	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09483010 HIGH SCHOOL WASH AT TUCSON, AZ--CONTINUED







09483025 SILVERCROFT WASH AT TUCSON, AZ

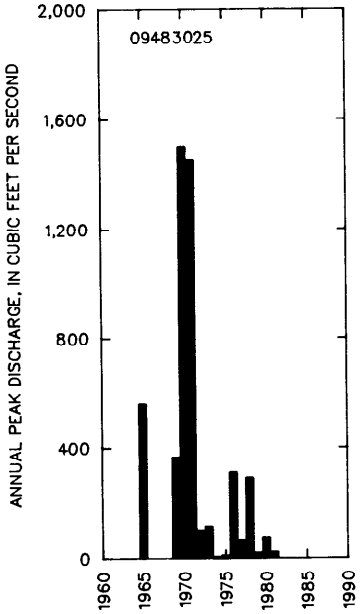
LOCATION.--Lat 32°13'53", long 111°00'10", in NW¼ sec.10, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, 0.1 mi west of Silverbell Road, 0.3 mi northwest of St. Mary's Hospital, and 0.4 mi north of Anklam Road at Tucson.

DRAINAGE AREA.--2.74 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	07-10-65	[1]560	HP,C
1969	08-00-69	[2]365	C
1970	07-20-70	[3]1,500	C
1971	08-00-71	1,450	C
1972	00-00-72	100	ES,C
1973	07-00-73	115	C
1974	07-20-74	5.0	LT,C
1975	10-30-74	10	LT,C
1976	09-25-76	310	C
1977	01-01-77	63	C
1978	10-06-77	290	C
1979	07-20-79	19	C
1980	08-24-80	72	C
1981	07-21-81	22	C

[1]Highest since 1961.
[2]Highest since 1965.
[3]Highest since 1961.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965, 1969-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
90	332	659	1,370	2,200	3,360

WEIGHTED SKEW (LOGS)= 0.01
MEAN (LOGS)= 1.96
STANDARD DEV. (LOGS)= 0.67

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
44.6	3.3	2,540	0.0	1.0	11.8	1.9	4.4

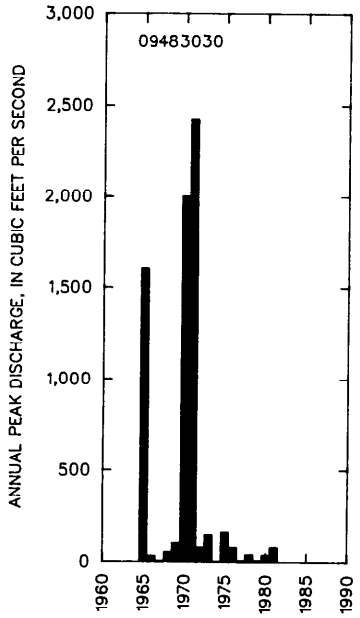
09483030 ANKLAM WASH AT TUCSON, AZ

LOCATION.--Lat 32°13'30", long 111°01'50", in SE¼ sec.8, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, at Anklam Road, 1 mi west of Tucson city limits, and 2 mi west of St. Mary's Hospital.

DRAINAGE AREA.--2.11 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	07-10-65	1,600	
1966	12-10-65	30	ES
1967	00-00-67	2.0	ES
1968	10-03-67	50	ES
1969	08-00-69	98	
1970	07-19-70	2,000	
1971	08-17-71	2,420	
1972	09-07-72	75	
1973	07-15-73	140	ES
1974	00-00-74	0	
1975	10-30-74	160	
1976	09-25-76	75	
1977	01-01-77	5.0	ES
1978	07-30-78	38	
1979	01-18-79	5.0	
1980	08-14-80	35	
1981	08-13-81	76	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2†	5†	10†	25†	50†	100†
50%	20%	10%	4%	2%	1%
75.6	362	855	2,210	4,140	7,390

WEIGHTED SKEW (LOGS)= 0.24
MEAN (LOGS)= 1.91
STANDARD DEV. (LOGS)= 0.78

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
298	2.1	2,700	0.0	1.0	11.8	1.9	4.4

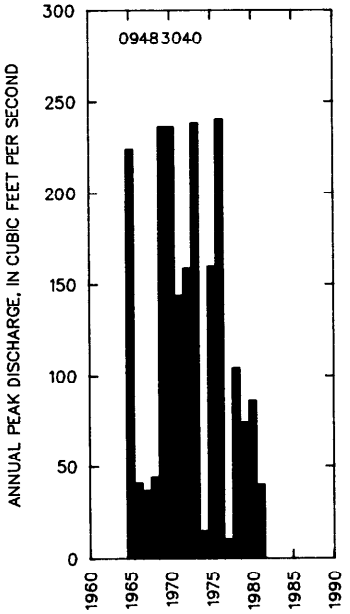
09483040 WEST SPEEDWAY WASH NEAR TUCSON, AZ

LOCATION.--Lat 32°14'20", long 111°02'43", in SE¼SE¼ sec.6, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, at driveway to Power substation off West Speedway Road, 2 mi west of Tucson city limits, and 3 mi northwest of St. Mary's Hospital.

DRAINAGE AREA.--0.46 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	07-10-65	224	
1966	09-13-66	41	
1967	00-00-67	37	
1968	10-03-67	44	
1969	08-08-69	236	
1970	09-04-70	236	
1971	08-20-71	144	
1972	08-12-72	159	
1973	07-00-73	238	
1974	09-14-74	15	
1975	09-07-75	160	
1976	09-25-76	240	
1977	00-00-77	10	ES
1978	10-06-77	104	
1979	07-20-79	74	
1980	08-24-80	86	
1981	08-13-81	40	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
92.2	202	291	419	521	627

WEIGHTED SKEW (LOGS)= -0.05
MEAN (LOGS)= 1.93
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
364	1.1	2,750	0.0	1.0	11.8	1.9	4.6

09483100 TANQUE VERDE CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°14'48", long 110°40'46", in NE¼NW¼ sec.2, T.14 S., R.16 E., Pima County, Hydrologic Unit 15050302, 4.4 mi east of Tanque Verde School, 7.4 mi upstream from Agua Caliente Wash, and 17.5 mi east of city hall in Tucson.

DRAINAGE AREA.--43.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1960	01-11-60	789	1973	10-19-72	2,120
1961	09-08-61	1,260	1974	07-08-74	804
1962	12-16-61	925	1975	00-00-75	210
1963	02-11-63	1,520	1976	09-05-76	300
1964	09-10-64	2,630	1977	01-01-77	420
1965	09-04-65	828	1978	07-25-78	1,280
1966	12-22-65	2,760	1979	12-18-78	4,100
1967	07-16-67	1,260	1980	02-14-80	1,150
1968	12-20-67	3,080	1981	07-30-81	6,700
1969	01-15-69	278	1982	08-23-82	2,460
1970	03-02-70	1,060	1983	02-03-83	1,100
1971	08-21-71	2,350	1984	10-02-83	8,600
1972	07-16-72	1,190	1985	12-28-84	7,880

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
156	11.0	4,780	21.0	1.0	17.0	2.0	4.0

09483100 TANQUE VERDE CREEK NEAR TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1960-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	44	0.00	4.6	12	2.6	4.3
NOVEMBER	12	0.00	2.1	3.4	1.7	1.9
DECEMBER	198	0.00	25	51	2.1	23.1
JANUARY	94	0.00	15	24	1.6	13.8
FEBRUARY	83	0.00	21	31	1.5	19.8
MARCH	100	0.00	15	26	1.7	14.0
APRIL	19	0.00	3.4	5.2	1.5	3.2
MAY	3.5	0.00	0.31	0.90	2.9	0.3
JUNE	0.82	0.00	0.05	0.21	3.9	0.1
JULY	16	0.00	3.2	4.8	1.5	3.0
AUGUST	46	0.00	8.2	12	1.5	7.7
SEPTEMBER	69	0.00	9.6	19	2.0	9.0
ANNUAL	32	1.1	8.9	8.5	0.96	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1961-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.04	0.00	0.00	0.00	0.00	0.00
183	0.40	0.06	0.02	0.01	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1960-85

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1,530	3,130	4,620	7,110	9,460	12,300

WEIGHTED SKEW (LOGS)= 0.23
MEAN (LOGS)= 3.20
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1960-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	267	525	757	1,130	1,470	1,870
3	161	334	495	758	1,000	1,300
7	98	198	285	420	539	673
15	63	131	195	300	398	515
30	41	86	130	206	281	375
60	27	56	82	126	167	216
90	20	43	64	101	137	180

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-74

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
181	38	16	8.9	5.4	1.2	0.18	0.07	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09483042 CEMETERY WASH AT TUCSON, AZ

LOCATION.--Lat 32°15'50", long 110°58'38", in NW¼NW¼ sec.36, T.13 S., R.13 E., Pima County, Hydrologic Unit 15050301, at U.S. Highway 89, 0.25 mi north of junction with State Highway 84 in Tucson.

DRAINAGE AREA.--1.17 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	08-00-66	229	C	1978	07-30-78	160	C
1967	07-17-67	396	C	1979	08-12-79	375	C
1968	08-20-68	600	C	1980	08-14-80	225	C
1969	11-14-68	570	C	1981	04-30-81	156	C
1970	08-18-70	285	C	1982	08-23-82	540	C
1971	08-00-71	100	ES,C	1983	08-15-83	209	C
1972	08-12-72	400	ES,C	1984	10-02-83	456	C
1973	07-00-73	150	ES,C	1985	00-00-85	172	C
1974	09-06-74	580	C	1986	07-15-86	264	C
1975	07-17-75	290	C	1987	02-25-87	52	C
1976	09-25-76	360	C	1988	08-20-88	216	C
1977	09-10-77	205	C	1989	07-26-89	262	C

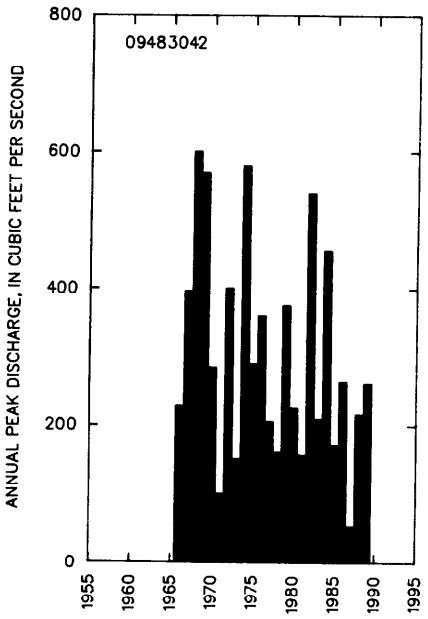
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
274	418	517	646	743	842

WEIGHTED SKEW (LOGS)= -0.15
MEAN (LOGS)= 2.43
STANDARD DEV. (LOGS)= 0.22

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
40.0	2.2	2,370	0.0	1.0	11.0	1.9	4.2

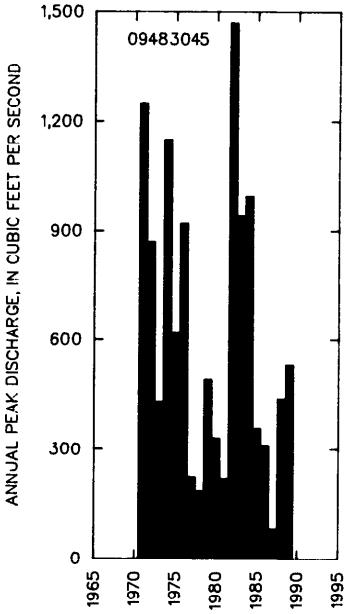
09483045 FLOWING WELLS WASH AT TUCSON, AZ

LOCATION.--Lat 32°15'55", long 110°59'40", in SW¼SW¼ sec.26, T.13 E., R.13 S., Pima County, Hydrologic Unit 15050301, at intersection of Ft. Lowell Road and FLowing Wells Road in Tucson city limits.

DRAINAGE AREA.--3.53 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1971	08-00-71	1,250	C
1972	08-12-72	870	C
1973	00-00-73	430	C
1974	09-06-74	1,150	C
1975	07-12-75	620	C
1976	07-11-76	920	C
1977	09-10-77	225	C
1978	07-30-78	185	C
1979	08-12-79	490	C
1980	02-13-80	330	C
1981	04-30-81	220	C
1982	08-23-82	1,470	C
1983	08-09-83	943	C
1984	07-22-84	995	C
1985	00-00-85	356	C
1986	07-15-86	310	C
1987	02-25-87	81	C
1988	08-19-88	438	C
1989	07-26-89	532	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1971-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
524	911	1,200	1,610	1,920	2,260

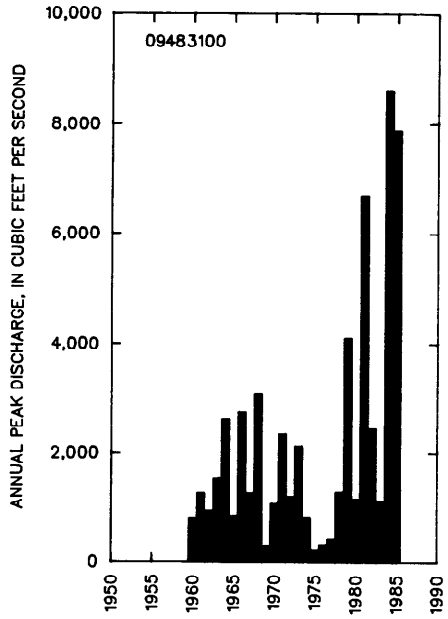
WEIGHTED SKEW (LOGS)= -0.17
MEAN (LOGS)= 2.71
STANDARD DEV. (LOGS)= 0.29

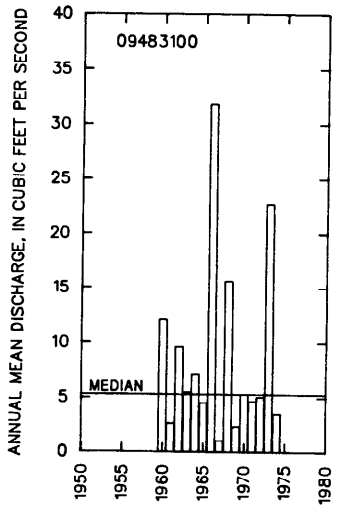
† Reliability of values in column is uncertain, and potential errors are large.

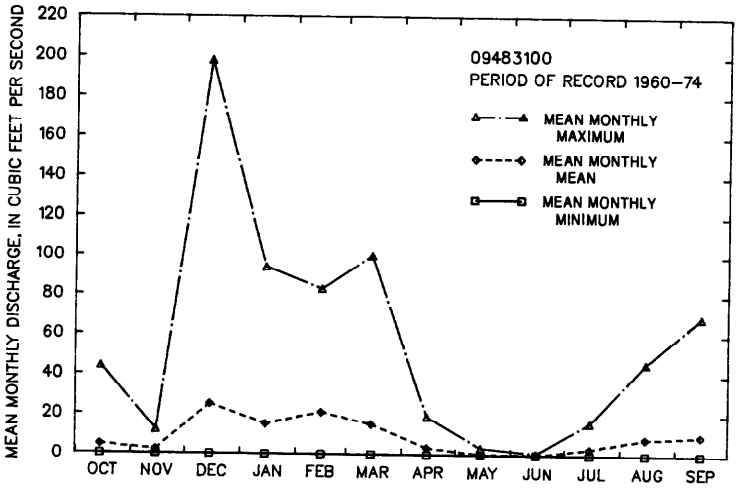
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
32.1	4.2	2,380	0.0	1.0	11.0	1.9	4.2

09483100 TANQUE VERDE CREEK NEAR TUCSON, AZ--CONTINUED







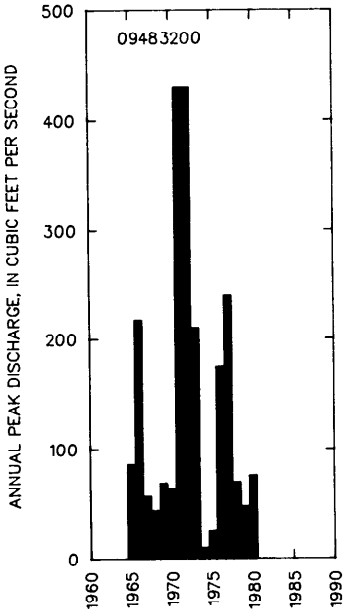
09483200 AGUA CALIENTE WASH TRIBUTARY NEAR TUCSON, AZ

LOCATION.--Lat 32°16'07", long 110°44'15", in SW¼SW¼ sec.29, T.13 S., R.16 E., Pima County, Hydrologic Unit 15050302, at Soldier Trail, 1.4 mi north of Tanque Verde Road, and 5 mi northeast of Tucson city limits.

DRAINAGE AREA.--2.04 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	08-00-65	86	
1966	07-19-66	217	
1967	08-00-67	57	
1968	10-03-67	44	
1969	08-00-69	69	
1970	03-02-70	64	
1971	08-19-71	430	
1972	08-00-72	430	
1973	10-00-72	210	
1974	07-07-74	10	LT
1975	07-25-75	25	
1976	07-17-76	175	
1977	00-00-77	240	
1978	10-06-77	70	
1979	08-12-79	48	
1980	08-13-80	76	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
98.9	208	309	470	619	793

WEIGHTED SKEW (LOGS)= 0.05
MEAN (LOGS)= 2.00
STANDARD DEV. (LOGS)= 0.38

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
368	4.6	3,300	7.8	1.0	14.0	1.9	4.1

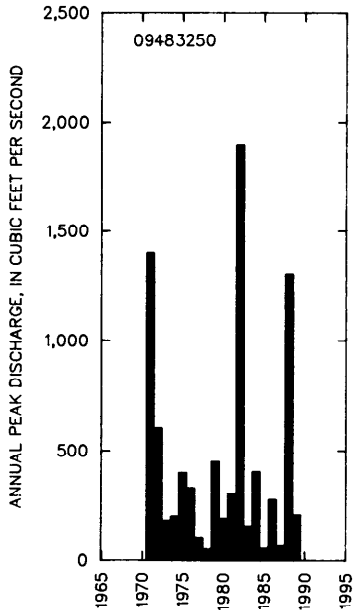
09483250 ROB WASH AT TUCSON, AZ

LOCATION.--Lat 32°14'08", long 110°48'58", in NE¼NW¼ sec.9, T.14 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Speedway BLvd, 0.4 mi west of Pantano Road, and 1 mi north of East Broadway in Tucson city limits.

DRAINAGE AREA.--2.08 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1971	00-00-71	1,400	ES,C
1972	00-00-72	600	ES,C
1973	00-00-73	180	C
1974	01-00-74	200	C
1975	07-12-75	400	C
1976	09-25-76	330	C
1977	08-01-77	100	C
1978	12-28-77	50	ES,C
1979	08-12-79	450	C
1980	07-26-80	190	C
1981	07-19-81	305	C
1982	08-23-82	1,900	C
1983	09-23-83	156	C
1984	07-16-84	405	C
1985	00-00-85	55	C
1986	08-24-86	277	C
1987	10-10/86	65	C
1988	08-20-88	1,300	C
1989	07-21-89	207	C



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1971-86

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
267	622	973	1,580	2,160	2,870

WEIGHTED SKEW (LOGS)= 0.06
MEAN (LOGS)= 2.43
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
55.6	4.7	2,710	0.0	1.0	11.0	1.9	3.6

09484000 SABINO CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°19'01", long 110°48'36", in SE¼NE¼ sec.9, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, on right bank 0.5 mi north of Coronado National Forest boundary and 12 mi northeast of city hall in Tucson.

DRAINAGE AREA.--35.5 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1932	07-15-32	706		1961	08-30-61	910	
1933	09-10-33	510		1962	09-26-62	1,010	
1934	09-22-34	472		1963	08-15-63	2,070	
1935	02-06-35	540		1964	09-13-64	1,310	
1936	01-29-36	500		1965	02-07-65	244	
1937	02-07-37	2,020		1966	08-10-66	6,400	
1938	03-03-38	3,200		1967	07-17-67	788	
1939	08-06-39	385		1968	12-19-67	2,340	
1940	02-23-40	904		1969	01-14-69	310	
1941	12-30-40	3,180		1970	09-06-70	7,730	LT
1942	09-10-42	449		1971	08-10-71	660	
1943	03-05-43	567		1972	10-01-71	1,710	
1944	07-08-44	175		1973	10-19-72	2,750	
1945	07-30-45	916		1974	07-20-74	117	
1946	08-23-46	2,000		1975	00-00-75	70	
1947	12-26-46	227		1976	09-26-76	580	
1948	08-06-48	380		1977	07-10-77	480	
1949	08-08-49	1,430		1978	03-02-78	3,160	
1950	07-07-50	2,260		1979	12-18-78	7,400	
1951	08-02-51	750		1980	02-14-80	2,290	
1952	01-13-52	1,640		1981	07-31-81	1,420	
1953	07-16-53	861		1982	08-13-82	2,000	
1954	03-23-54	5,110		1983	02-03-83	1,340	
1955	08-03-55	2,000		1984	10-01-83	6,500	
1956	08-11-56	55		1985	12-28-84	2,350	
1957	01-09-57	2,030		1986	02-16-86	910	
1958	03-22-58	1,500		1987	08-13-87	866	
1959	07-26-59	4,240		1988	08-20-88	350	
1960	12-24-59	1,600		1989	08-07-89	350	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
482	13.0	6,300	85.0	1.0	22.6	2.1	4.3

09484000 SABINO CREEK NEAR TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1933-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	84	0.00	5.1	15	2.9	4.0
NOVEMBER	28	0.00	3.4	5.9	1.7	2.7
DECEMBER	217	0.00	17	38	2.3	13.1
JANUARY	106	0.03	16	23	1.5	12.7
FEBRUARY	93	0.02	21	27	1.3	16.5
MARCH	120	0.30	26	31	1.2	20.8
APRIL	54	0.03	9.8	13	1.3	7.7
MAY	17	0.00	1.8	3.4	1.9	1.5
JUNE	5.2	0.00	0.33	0.95	2.8	0.3
JULY	29	0.00	4.9	7.1	1.4	3.9
AUGUST	70	0.09	12	14	1.2	9.4
SEPTEMBER	105	0.01	9.3	22	2.4	7.3
ANNUAL	48	0.52	11	9.8	0.93	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1934-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.10	0.00	0.00	0.00	0.00	0.00
120	0.63	0.07	0.00	0.00	0.00	0.00
183	1.8	0.59	0.28	0.14	0.06	0.03

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1932-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,090	2,520	3,860	6,050	8,060	10,400

WEIGHTED SKEW (LOGS)= -0.10
MEAN (LOGS)= 3.03
STANDARD DEV. (LOGS)= 0.44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1933-74

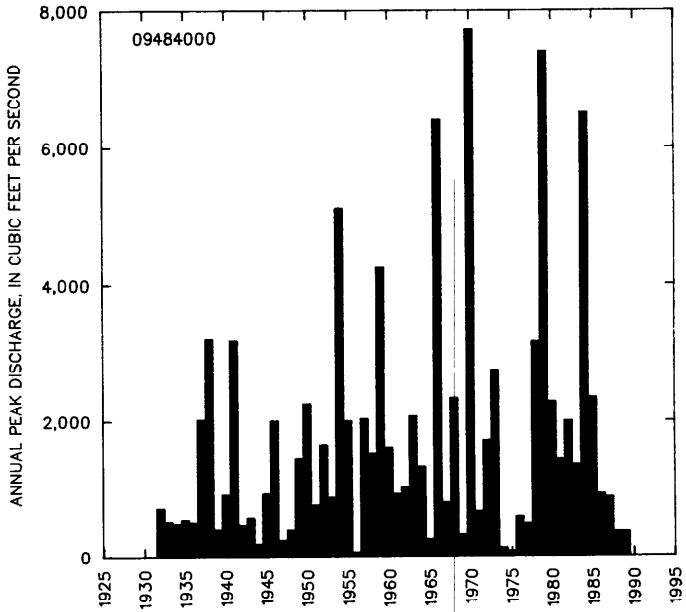
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	269	629	947	1,430	1,840	2,290
3	160	366	548	822	1,060	1,310
7	94	207	301	437	548	665
15	60	125	179	255	316	381
30	42	86	120	167	204	240
60	27	57	79	110	134	157
90	21	46	66	93	115	137

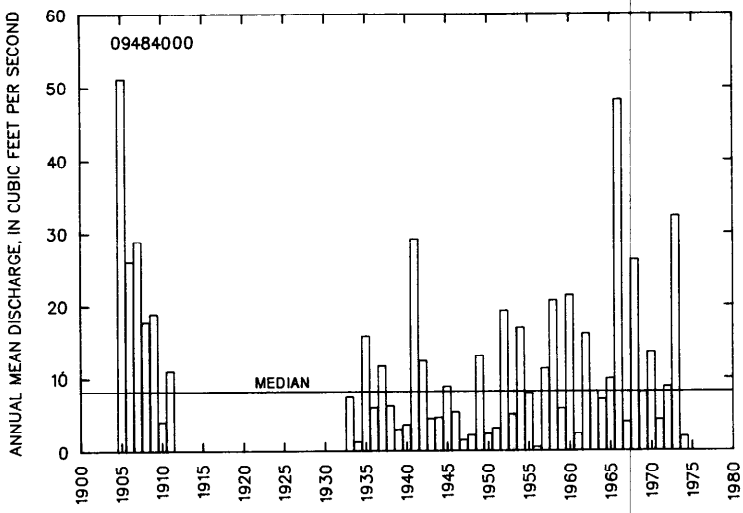
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-74

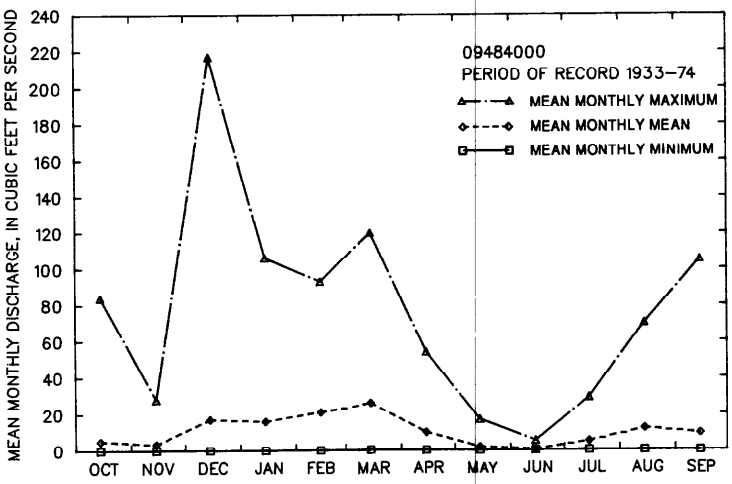
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
139	48	26	15	9.8	4.1	1.8	0.73	0.24	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09484000 SABINO CREEK NEAR TUCSON, AZ--CONTINUED







GILA RIVER BASIN

09484200 BEAR CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°18'22", long 110°48'03", in NW¼ sec.15, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, on left bank 0.8 mi upstream from mouth and 15 mi northeast of city hall in Tucson.

DRAINAGE AREA.--16.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	01-11-60	575	
1961	09-12-61	53	
1962	12-16-61	225	
1963	02-11-63	357	
1964	09-13-64	433	
1965	02-07-65	192	
1966	12-22-65	1,150	
1967	09-25-67	13	
1968	12-20-67	621	
1969	01-15-69	214	
1970	09-06-70	670	
1971	08-19-71	495	
1972	10-01-71	247	
1973	10-19-72	618	
1974	01-09-74	57	
1979	12-18-78	[1]1,400	HP

[1]Highest since 1959.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
502	11.0	5,860	82.0	1.0	20.6	1.9	4.0

09484200 BEAR CREEK NEAR TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1960-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	27	0.00	3.2	7.4	2.3	5.6
NOVEMBER	4.0	0.00	1.0	1.4	1.4	1.8
DECEMBER	89	0.00	13	23	1.8	22.4
JANUARY	57	0.00	10	15	1.5	18.0
FEBRUARY	42	0.00	12	15	1.2	21.8
MARCH	41	0.00	8.8	12	1.3	15.6
APRIL	13	0.00	2.1	3.5	1.7	3.7
MAY	2.6	0.00	0.22	0.67	3.1	0.4
JUNE	0.02	0.00	0.00	0.01	3.9	0.0
JULY	7.9	0.00	0.66	2.0	3.1	1.2
AUGUST	7.4	0.00	1.8	2.4	1.3	3.2
SEPTEMBER	20	0.00	3.6	6.7	1.8	6.4
ANNUAL	16	0.14	4.7	4.6	0.99	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1961-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.19	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1960-74, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
370	675	917	1,260	1,550	1,850

WEIGHTED SKEW (LOGS)= -0.12
MEAN (LOGS)= 2.56
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1960-74

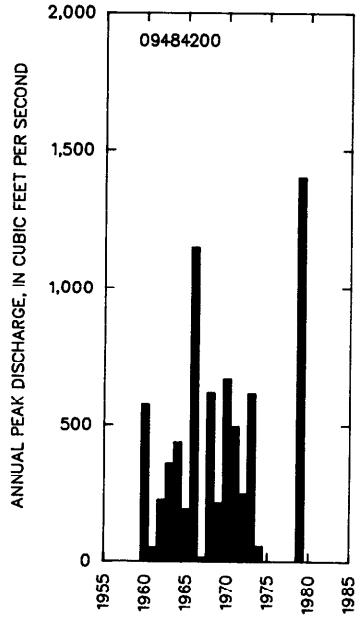
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	116	292	429	605	731	849
3	71	183	273	392	480	565
7	43	108	160	227	274	319
15	27	71	107	154	190	223
30	17	47	75	114	146	178
60	11	33	53	84	110	136
90	8.5	26	43	69	90	112

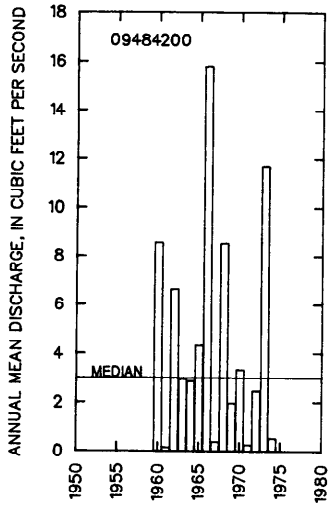
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-74

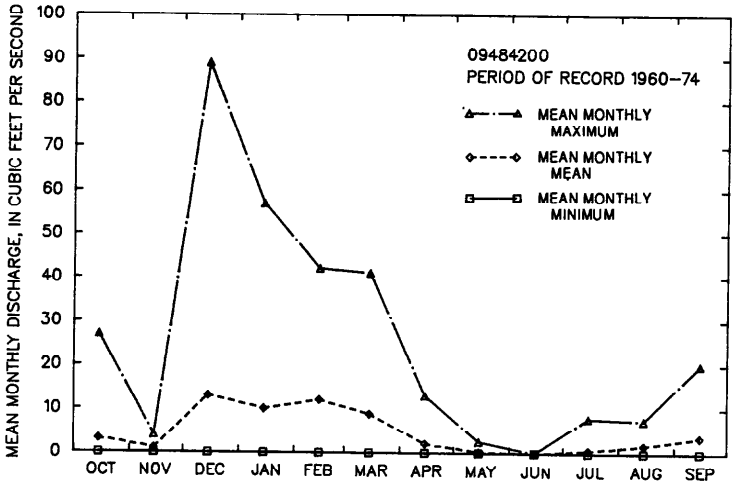
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
71	25	12	5.4	2.8	0.83	0.23	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09484200 BEAR CREEK NEAR TUCSON, AZ--CONTINUED







09484500 TANQUE VERDE CREEK AT TUCSON, AZ

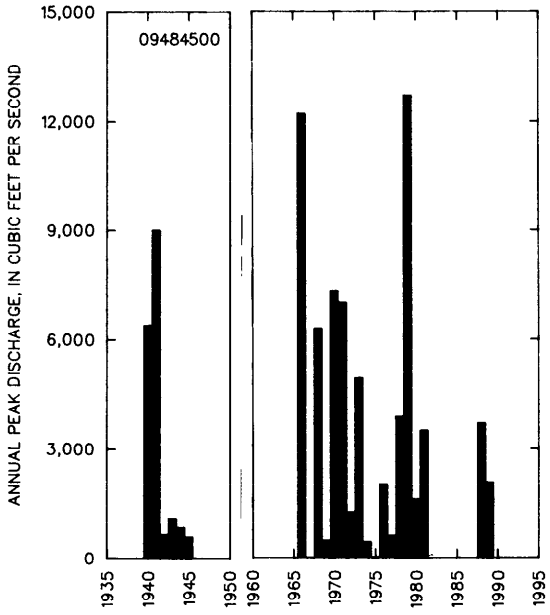
LOCATION.--Lat 32°15'57", long 110°50'27", in SE¼SE¼ sec.30, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Sabino Canyon Road, 1 mi downstream from Sabino Creek, and 1.25 mi northeast of Tucson city limits.

DRAINAGE AREA.--219 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	08-13-40	6,400		1972	10-01-71	1,240	
1941	12-30-40	9,000		1973	10-19-72	4,930	
1942	02-28-42	639		1974	09-21-74	420	
1943	03-05-43	1,090		1975	04-24-75	10	ES
1944	08-09-44	825		1976	09-26-76	2,020	
1945	08-09-45	573		1977	00-00-77	600	
1966	12-22-65	12,200		1978	03-02-78	3,880	
1967	00-00-67	0		1979	12-18-78	[1]12,700	
1968	12-20-67	6,300		1980	02-14-80	1,600	
1969	03-22-69	460		1981	07-31-81	3,500	
1970	09-06-70	7,340		1988	08-20-88	3,700	
1971	08-19-71	7,000		1989	08-18-89	2,070	

[1]Highest since 1940.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-45, 1966-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,950	5,410	9,050	15,400	21,600	29,100

WEIGHTED SKEW (LOGS)= -0.17
MEAN (LOGS)= 3.27
STANDARD DEV. (LOGS)= 0.54

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
109	19.0	4,340	36.0	1.0	16.7	2.0	4.2

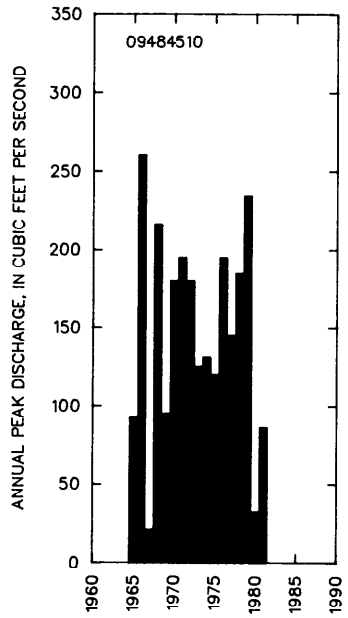
09484510 VENTANA CANYON WASH NEAR TUCSON, AZ

LOCATION.--Lat 32°18'35", long 110°50'20", in SW¼SW¼ sec.8, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Sunrise Drive (Sabino Canyon West Road), 0.5 mi above Esperero Wash, and 4 mi northeast of Tucson city limits.

DRAINAGE AREA.--6.46 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1965	09-08-65	93
1966	12-22-65	260
1967	10-04-66	21
1968	12-20-67	216
1969	08-01-69	95
1970	09-06-70	180
1971	08-19-71	195
1972	07-16-72	180
1973	10-19-72	125
1974	08-02-74	131
1975	07-25-75	120
1976	09-25-76	195
1977	00-00-77	145
1978	07-25-78	185
1979	12-18-78	234
1980	07-13-80	32
1981	07-31-81	86



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
147	202	235	275	303	329

WEIGHTED SKEW (LOGS)= -0.32
MEAN (LOGS)= 2.16
STANDARD DEV. (LOGS)= 0.17

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
553	5.4	4,600	51.0	1.0	13.0	1.8	4.2

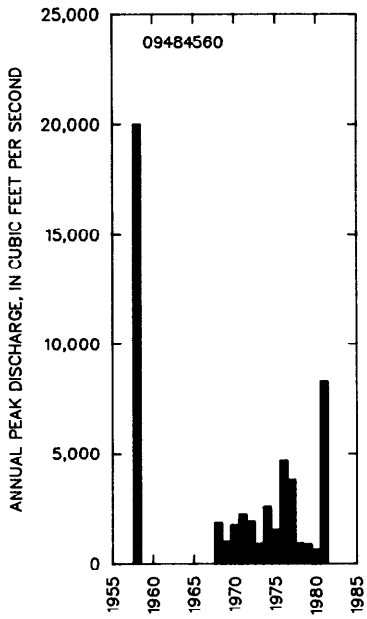
09484560 CIENEGA CREEK NEAR PANTANO, AZ

LOCATION.--Lat 31°59'08", long 110°33'57", in NW¼ sec. 1, T.17 S., R.17 E., Pima County, Hydrologic Unit 15050302, on downstream end of first pier from right bank of bridge on Interstate Highway 10, and 1.2 mi southeast of Pantano.

DRAINAGE AREA.--289 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1958	08-11-58	20,000	ES,HP
1968	07-26-68	1,870	
1969	07-22-69	990	
1970	07-20-70	1,770	
1971	08-03-71	2,240	
1972	09-13-72	1,930	
1973	02-22-73	878	
1974	07-19-74	2,570	
1975	09-02-75	1,550	
1976	08-10-76	4,650	
1977	09-11-77	3,800	
1978	10-06-77	900	
1979	08-12-79	860	
1980	09-07-80	630	
1981	07-06-81	8,310	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958, 1968-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,880	4,020	6,150	9,930	13,700	18,500

WEIGHTED SKEW (LOGS)=	0.36
MEAN (LOGS)=	2.30
STANDARD DEV. (LOGS)=	0.37

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
59.8	31.2	4,890	13.0	2.5	16.6	1.9	4.1

09484570 MESCAL ARROYO NEAR PANTANO, AZ

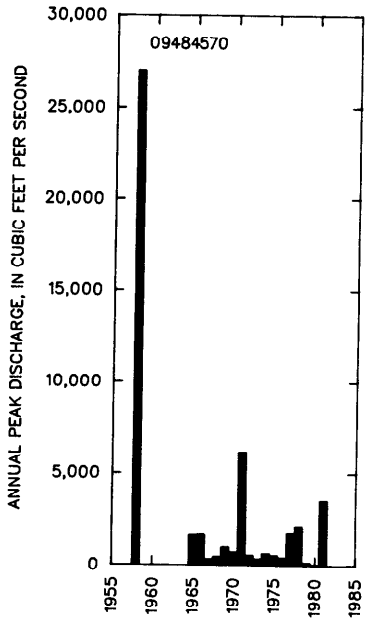
LOCATION.--Lat 31°59'23", long 110°33'52", in NE¼NW¼ sec.1, T.17 S., R.17 E., Pima County, Hydrologic Unit 15050302, at county road, 0.25 mi above mouth, and 1.1 mi southeast of Pantano.

DRAINAGE AREA.--38.4 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1958	08-11-58	[1]27,000	HP
1965	09-12-65	1,600	
1966	08-13-66	1,610	
1967	07-12-67	290	
1968	08-03-68	430	
1969	08-05-69	950	
1970	07-21-70	680	
1971	08-19-71	6,140	
1972	09-00-72	520	
1973	07-00-73	320	
1974	08-19-74	620	
1975	09-06-75	510	
1976	07-29-76	385	
1977	09-10-77	1,700	
1978	10-06-77	2,100	
1979	08-12-79	130	
1980	09-07-80	15	
1981	07-06-81	3,500	

[1]Highest since 1930.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958, 1965-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
753	2,060	3,620	6,800	10,400	15,400

WEIGHTED SKEW (LOGS)=	0.35
MEAN (LOGS)=	2.91
STANDARD DEV. (LOGS)=	0.50

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
82.9	11.9	4,260	0.0	1.0	15.0	1.9	4.0

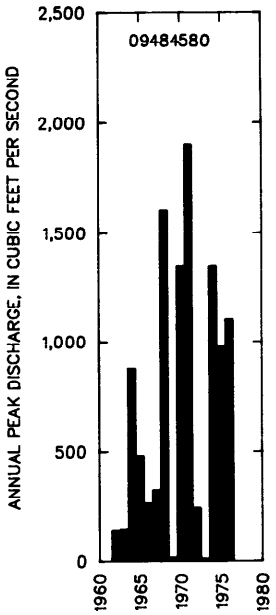
09484580 BARREL CANYON NEAR SONOITA, AZ

LOCATION.--Lat 31°51'42", long 110°41'25", in SE¼SE¼ sec.15, T.18 S., R.16 E., Pima County, Hydrologic Unit 15050302, at State Highway 83, 13 mi north of Sonoita.

DRAINAGE AREA.--14.1 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	140	
1963	00-00-63	145	
1964	09-10-64	879	
1965	09-08-65	480	
1966	00-00-66	260	
1967	09-00-67	323	
1968	07-26-68	1,600	
1969	07-23-69	15	LT
1970	07-20-70	1,350	
1971	08-00-71	1,900	
1972	07-00-72	240	
1973	00-00-73	10	LT
1974	09-21-74	1,350	
1975	09-13-75	980	
1976	08-00-76	1,100	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
504	1,190	1,810	2,760	3,580	4,480

WEIGHTED SKEW (LOGS)= -0.34
MEAN (LOGS)= 2.68
STANDARD DEV. (LOGS)= 0.47

† Reliability of values in column is uncertain, and potential errors are large.

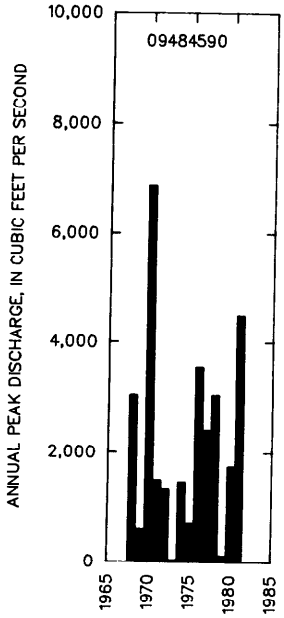
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
190	5.9	5,000	0.0	3.0	16.0	1.9 •	4.1

09484590 DAVIDSON CANYON WASH NEAR VAIL, AZ

LOCATION.--Lat 31°59'37", long 110°38'40", in SW¼SE¼ sec.31, T.16 S., R.17 E., Hydrologic Unit 15050302, on right bank 0.3 mi upstream from Interstate Highway 10, 2.0 mi upstream from mouth, and 5.5 mi southeast of Vail.

DRAINAGE AREA.--50.5 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1968	07-26-68	3,040
1969	08-05-69	587
1970	07-20-70	6,860
1971	08-10-71	1,490
1972	09-07-72	1,320
1973	10-19-72	28
1974	09-21-74	1,460
1975	07-08-75	708
1976	07-12-76	3,550
1977	09-10-77	2,400
1978	10-06-77	3,040
1979	08-15-79	105
1980	09-07-80	1,740
1981	07-27-81	4,480

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,900	3,430	4,640	6,380	7,800	9,340

WEIGHTED SKEW (LOGS)= -0.11
MEAN (LOGS)= 3.27
STANDARD DEV. (LOGS)= 0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
86.2	13.6	4,340	0.0	1.0	14.9	1.9	4.1

09484600 PANTANO WASH NEAR VAIL, AZ

LOCATION.--Lat 32°02'09", long 110°40'37", in SW¼SE¼ sec.14, T.16 S., R.16 E., Pima County, Hydrologic Unit 15050302, 60 ft upstream from dam, 2.2 mi southeast of Vail, and 20 mi southeast of city hall in Tucson.

DRAINAGE AREA.--457 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1958	08-11-[1]8	[1]38,000	ES,HP	1974	07-20-74	1,780	
1959	08-17-59	9,310		1975	09-02-75	1,200	
1960	08-09-60	7,300		1976	07-25-76	5,200	
1961	08-28-61	5,280		1977	09-10-77	1,600	
1962	09-26-62	1,500		1978	10-06-77	1,300	
1963	08-25-63	9,700		1979	12-18-78	790	
1964	09-10-64	9,960		1980	09-07-80	1,300	
1965	09-12-65	5,880		1981	09-22-81	13,000	
1966	08-13-66	7,410		1982	08-23-82	3,400	
1967	08-18-67	7,680		1983	08-03-83	1,840	
1968	12-20-67	2,640		1984	10-02-83	12,000	
1969	08-05-69	857		1985	08-20-85	363	
1970	07-20-70	6,850		1986	08-17-86	1,020	
1971	08-19-71	8,700		1987	09-24-87	1,370	
1972	09-07-72	1,460		1988	07-29-88	7,420	
1973	10-04-72	371		1989	07-21-89	803	

[1]Highest since 1930.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.3	43.5	4,500	15.0	1.75	15.4	1.9	2.9

09484600 PANTANO WASH NEAR VAIL, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1960-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	6.7	0.10	2.4	2.1	0.88	3.0
NOVEMBER	3.0	0.10	1.4	0.76	0.53	1.8
DECEMBER	50	0.10	7.8	16	2.0	9.8
JANUARY	18	0.10	3.1	4.2	1.4	3.8
FEBRUARY	36	0.10	5.0	9.3	1.8	6.3
MARCH	18	0.12	3.2	4.4	1.4	3.9
APRIL	5.2	0.32	1.8	1.2	0.65	2.3
MAY	2.0	0.19	1.2	0.48	0.39	1.5
JUNE	2.6	0.07	1.1	0.64	0.60	1.3
JULY	50	2.4	13	13	1.0	16.0
AUGUST	93	0.52	25	30	1.2	31.6
SEPTEMBER	105	0.16	15	25	1.7	18.6
ANNUAL	13	2.3	6.7	3.8	0.56	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.42	0.14	0.00	0.00	0.00	0.00
3	0.45	0.14	0.00	0.00	0.00	0.00
7	0.53	0.16	0.00	0.00	0.00	0.00
14	0.62	0.26	0.00	0.00	0.00	0.00
30	0.70	0.33	0.21	0.13	0.07	0.05
60	0.86	0.43	0.27	0.17	0.09	0.06
90	1.2	0.62	0.37	0.22	0.11	0.06
120	1.8	0.75	0.41	0.24	0.11	0.07
183	2.4	0.90	0.47	0.25	0.11	0.07

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,000	7,510	12,000	19,600	26,800	35,000

WEIGHTED SKEW (LOGS)= -0.11
MEAN (LOGS)= 3.47
STANDARD DEV. (LOGS)= 0.48

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1960-74

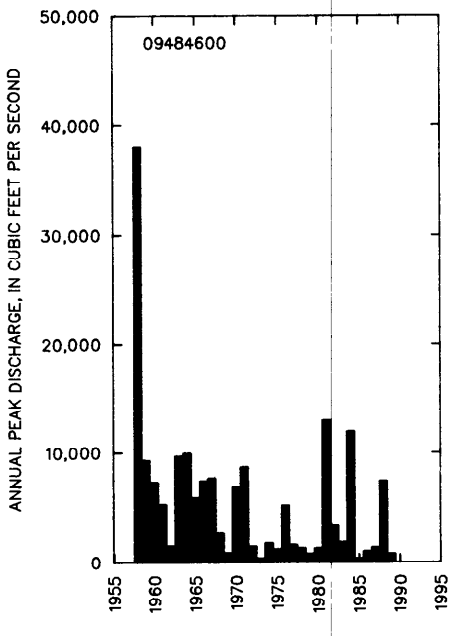
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	350	757	1,150	1,830	2,480	3,290
3	172	370	546	819	1,060	1,330
7	88	192	285	431	559	705
15	53	112	162	236	298	365
30	35	69	96	131	159	187
60	22	42	58	80	98	116
90	16	30	41	56	67	79

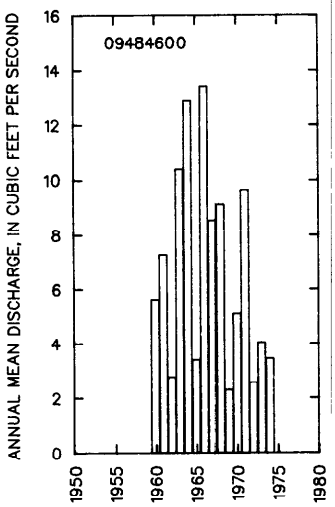
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-74

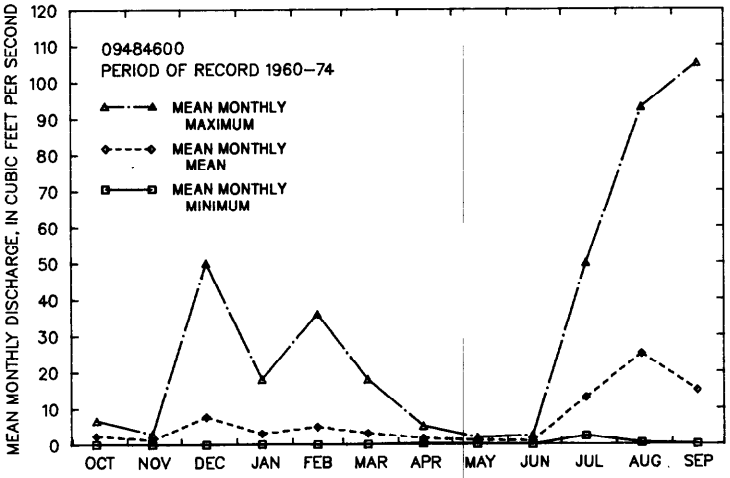
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
137	17	4.2	3.1	2.6	2.0	1.7	1.5	1.3	1.0	0.81	0.44	0.13	0.11	0.10	0.05	0.01

† Reliability of values in column is uncertain, and potential errors are large.

09484600 PANTANO WASH NEAR VAIL, AZ--CONTINUED







09485000 RINCON CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°07'46", long 110°37'32", in NW¼NE¼ sec.17, T.15 S., R.17 E., Pima County, Hydrologic Unit 15050302, 9 mi upstram from mouth and 22 mi southeast of city hall in Tucson.

DRAINAGE AREA.--44.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1953	07-30-53	194	1972	07-16-72	360
1954	08-19-54	2,160	1973	10-19-72	1,440
1955	08-03-55	8,250	1974	08-01-74	664
1956	07-20-56	150	1975	09-02-75	340
1957	01-09-57	3,570	1976	00-00-76	230
1958	03-22-58	492	1977	01-00-77	127
1959	10-21-58	5,220	1978	01-15-78	2,440
1960	01-12-60	747	1979	12-18-78	4,890
1961	08-22-61	2,600	1980	02-14-80	586
1962	01-24-62	227	1981	08-01-81	236
1963	08-25-63	3,420	1982	08-23-82	1,800
1964	09-23-64	948	1983	01-30-83	688
1965	08-18-65	311	1984	10-02-83	5,640
1966	12-22-65	3,100	1985	01-26-85	647
1967	08-13-67	157	1986	07-15-86	1,170
1968	02-12-68	1,860	1987	12-07-86	535
1969	09-06-69	548	1988	08-02-88	2,640
1970	08-01-70	1,200	1989	07-25-89	88
1971	08-19-71	9,660			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
612	9.0	4,850	57.0	1.09	19.2	2.1	4.2

09485000 RINCON CREEK NEAR TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1953-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	23	0.00	2.1	5.7	2.7	3.4
NOVEMBER	3.8	0.00	0.59	1.2	2.0	D.9
DECEMBER	130	0.00	9.5	28	2.9	15.3
JANUARY	63	0.00	8.3	16	2.0	13.3
FEBRUARY	75	0.00	12	23	1.9	18.8
MARCH	74	0.00	10	18	1.8	16.7
APRIL	18	0.00	2.4	4.7	2.0	3.8
MAY	2.0	0.00	0.16	0.42	2.6	0.3
JUNE	1.5	0.00	0.08	0.32	3.8	0.1
JULY	13	0.00	1.1	2.7	2.5	1.8
AUGUST	64	0.00	12	18	1.5	19.5
SEPTEMBER	19	0.00	3.8	6.3	1.7	6.1
ANNUAL	24	0.07	5.2	5.8	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1954-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.15	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1953-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
926	2,690	4,670	8,390	12,200	17,100

WEIGHTED SKEW (LOGS)= 0.04
MEAN (LOGS)= 2.96
STANDARD DEV. (LOGS)= 0.55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1953-74

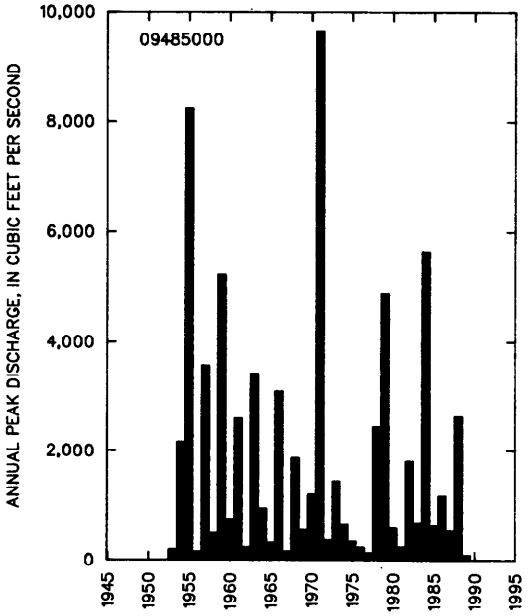
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	177	505	808	1,260	1,630	2,020
3	101	285	443	657	818	973
7	63	163	233	311	360	399
15	39	100	139	180	203	221
30	24	66	97	133	156	175
60	15	41	61	84	99	112
90	11	30	46	65	77	88

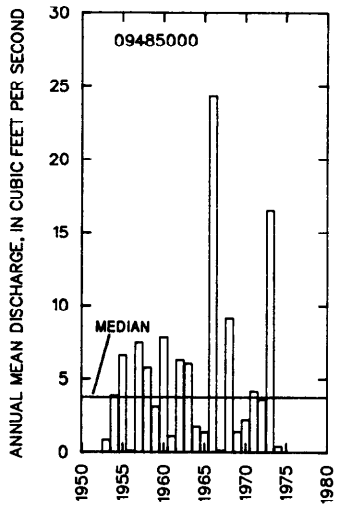
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1953-74

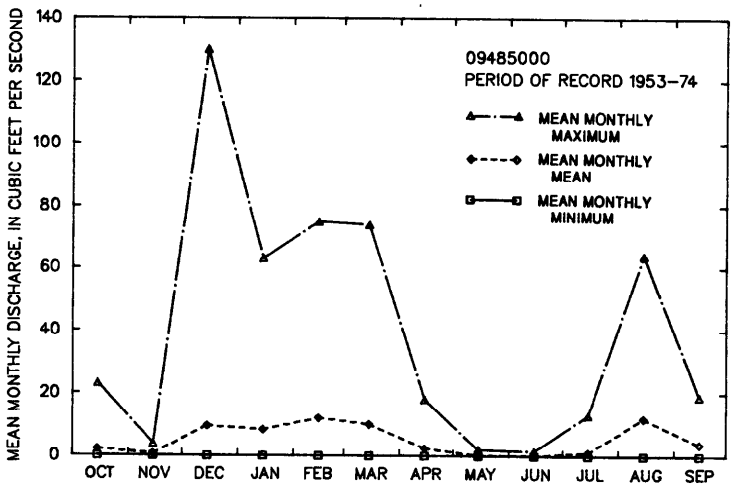
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
95	24	9.0	3.3	1.4	0.21	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09485000 RINCON CREEK NEAR TUCSON, AZ--CONTINUED



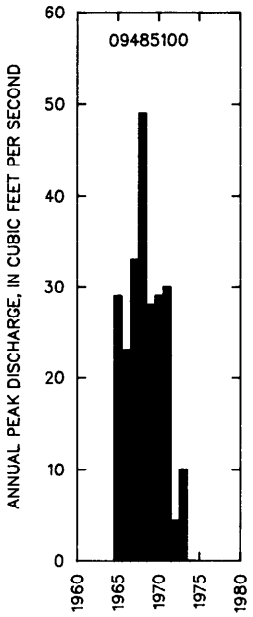




09485100 SAGUARO CORNERS WASH NEAR TUCSON, AZ

LOCATION.--Lat 32°10'11", long 110°44'15", in SW¼NW¼ SEC.32, T.14 S., R.16 E., Pima County, Hydrologic Unit 15050302, at Freeman Road, 0.9 mi south of Old Spanish Trail, and 4 mi southeast of Tucson city limits.

DRAINAGE AREA.--0.17 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	09-12-65	29	UR
1966	09-12-66	23	UR
1967	07-17-67	33	UR
1968	08-00-68	49	UR
1969	09-09-69	28	UR
1970	07-20-70	29	UR
1971	08-00-71	30	UR
1972	08-12-72	4.4	UR
1973	08-00-73	10	UR
1974	00-00-74	0	UR

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-74

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
27.4	34.4	39.1	44.8	49.1	53.4

WEIGHTED SKEW (LOGS)= 0.21
MEAN (LOGS)= 1.44
STANDARD DEV. (LOGS)= 0.11

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
117	0.4	3,040	0.0	1.0	12.0	1.8	4.0

GILA RIVER BASIN

09485500 PANTANO WASH NEAR TUCSON, AZ

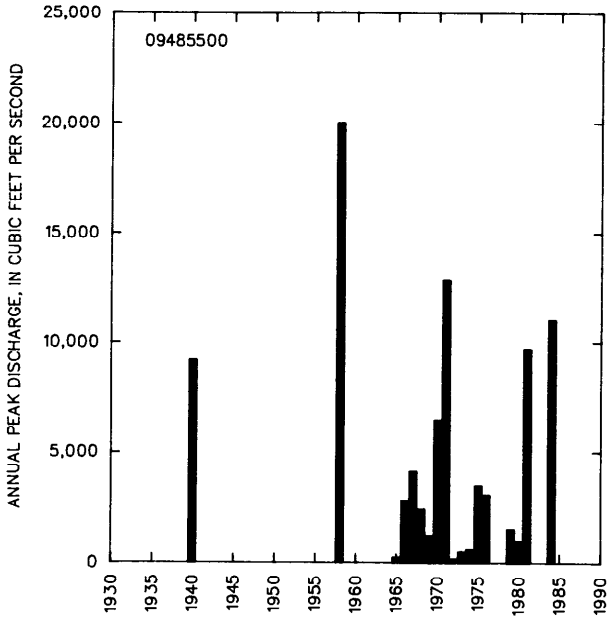
LOCATION.--Lat 32°14'57", long110 °50'53", in NW¼NE¼ sec.6, T.14 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Tanque Verde Road 0.7 mi northeast of Tucson city limits, and 1.75 mi above mouth.

DRAINAGE AREA.--602 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	08-13-40	9,200	HP
1958	08-12-58	[1]20,000	HP
1965	08-18-65	250	
1966	08-13-66	2,820	
1967	07-12-67	4,120	
1968	12-20-67	2,420	
1969	08-05-69	1,250	
1970	07-20-70	6,480	
1971	08-20-71	[2]12,800	
1972	09-07-72	180	
1973	10-19-72	500	ES
1974	07-20-74	600	ES
1975	07-16-75	3,490	
1976	08-10-76	3,080	
1979	00-00-79	1,530	
1980	00-00-80	1,000	
1981	00-00-81	9,700	
1984	83-10-01	11,000	HP

[1]Highest since 1930.
[2]Highest since 1958.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940, 1958, 1965-76, 1979-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,720	4,620	7,540	12,500	17.100	22,600

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 3.22
STANDARD DEV. (LOGS)= 0.53

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.4	54.4	4,560	16.0	1.1	17.1	1.9	4.1

09485550 ARCADIA WASH AT TUCSON, AZ

LOCATION.--Lat 32°14'37", long 110°53'05", in SE¼NW¼ sec.2, T.14 S., R.14 E., Pima County, Hydrologic Unit 15050302, on right bank 150 ft downstream from Pima Street in Tucson.

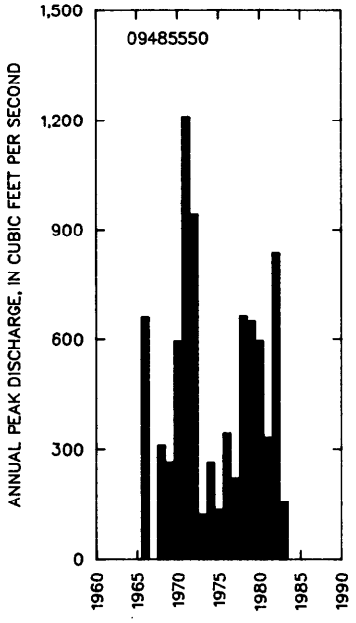
DRAINAGE AREA.--2.72 mi^2.

REMARKS.--Entire drainage basin is an urban, residential area.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	07-19-66	658	HP,C
1968	08-19-68	310	C
1969	08-05-69	265	C
1970	08-11-70	594	C
1971	08-17-71	[1]1,210	C
1972	08-12-72	940	C
1973	07-07-73	121	C
1974	07-18-74	264	C
1975	07-16-75	134	C
1976	09-25-76	342	C
1977	09-10-77	220	C
1978	09-21-78	661	C
1979	08-12-79	647	C
1980	08-13-80	595	C
1981	06-25-81	330	C
1982	09-11-82	836	C
1983	11-30-82	157	C

[1]Highest since 1963.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966, 1968-83

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
395	707	953	1,310	1,600	1,920

WEIGHTED SKEW (LOGS)= -0.07
MEAN (LOGS)= 2.59
STANDARD DEV. (LOGS)= 0.30

† Reliability of values in column is uncertain, and potential errors are large.

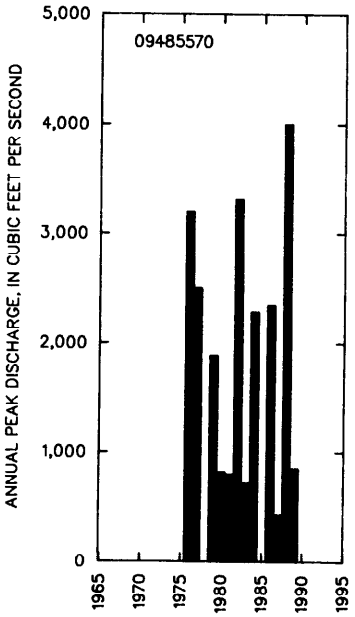
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
0.77	5.54	2,560	0.0	1.0	11.0	1.7	4.2

09485570 ALAMO WASH AT TUCSON, AZ

LOCATION.--Lat 32°15'31", long 110°53'01", in SE¼SE¼NW¼, sec.35, T.13 S., R.14 E., Pima County, Hydrologic Unit 15050302, 270 ft downstream from Glenn Street, 0.5 mi east of the intersection of Glenn Street and Swan Road in Tucson.

DRAINAGE AREA.--9.58 MI^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1976	09-25-76	3,200	C
1977	09-10-77	2,500	C
1979	08-12-79	1,890	C
1980	08-13-80	820	C
1981	06-25-81	800	C
1982	08-23-82	3,310	C
1983	09-23-83	714	C
1984	07-16-84	2,280	C
1986	07-21-86	2,340	C
1987	07-26-87	432	C
1988	08-20-88	4,000	C
1989	07-26-89	853	C

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1976-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
1,600	2,900	3,890	5,260	6,340	7,460

WEIGHTED SKEW (LOGS)= -0.27
MEAN (LOGS)= 3.18
STANDARD DEV. (LOGS)= 0.32

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.2	6.40	2,590	0.0	1.0	11.0	3.8	1.6

09485900 PIMA WASH NEAR TUCSON, AZ

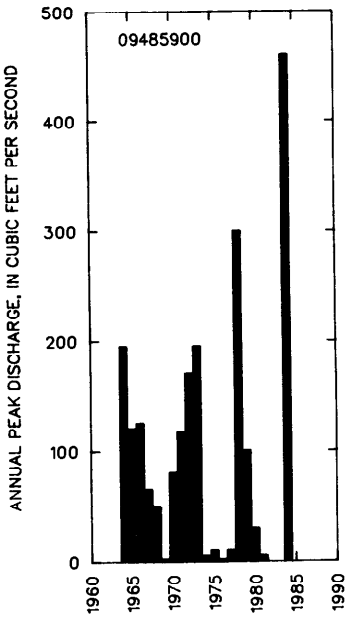
LOCATION.--Lat 32°20'15", long 110°57'35", in SW¼SW¼ sec.31, T.12 S., R.14 E., Pima County, Hydrologic Unit 15050302, at Ina Road, and 4 mi north of Tucson city limits.

DRAINAGE AREA.--4.93 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-06-64	195	
1965	00-00-65	120	LT
1966	12-22-65	125	
1967	07-17-67	65	
1968	08-06-68	50	
1969	09-06-69	2.0	ES
1970	00-00-70	80	
1971	08-12-71	117	
1972	09-01-72	170	
1973	10-19-72	195	
1974	09-07-74	5.0	LT
1975	10-30-74	10	LT
1976	09-26-76	2.0	ES
1977	01-00-77	10	ES
1978	07-26-78	300	
1979	12-18-78	100	
1980	09-26-80	30	
1981	05-01-81	5.0	
1984	10-01-83	[1]460	HP

[1]Highest since 1964.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
74.2	177	269	407	524	652

WEIGHTED SKEW (LOGS)= -0.39
MEAN (LOGS)= 1.84
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
533	5.5	4,430	18.0	1.0	16.0	1.9	4.5

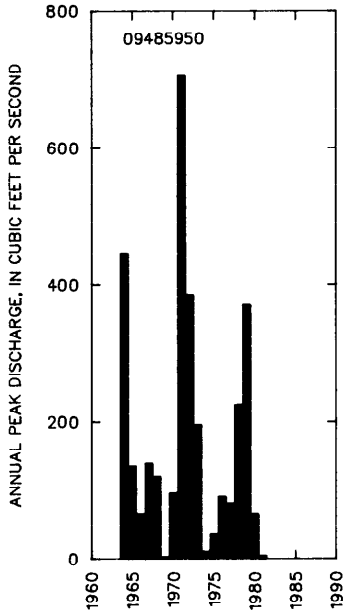
09485950 GERONIMO WASH NEAR TUCSON, AZ

LOCATION.--Lat 32°19'56", long 110°56'37", in SE¼NE¼ sec.6, T.13 S., R.14 E., Pima County, Hydrologic Unit 15050302, at Skyline Drive, 0.4 mi southeast of Ina Road, and 3.5 mi north of Tucson city limits.

DRAINAGE AREA.--2.15 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-06-64	445	
1965	08-02-65	135	
1966	12-22-65	65	
1967	07-17-67	139	
1968	08-10-68	120	
1969	09-06-69	2.0	ES
1970	09-00-70	95	
1971	08-12-71	705	
1972	09-01-72	385	
1973	10-00-72	195	
1974	07-19-74	10	LT
1975	10-29-74	35	
1976	09-26-76	90	
1977	09-10-77	80	
1978	07-26-78	225	
1979	08-12-79	370	
1980	08-13-80	65	
1981	07-10-81	4.0	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
118	271	414	643	850	1,090

WEIGHTED SKEW (LOGS)= -0.14
MEAN (LOGS)= 2.06
STANDARD DEV. (LOGS)= 0.44

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
699	3.6	3,600	0.0	1.0	15.0	1.9	4.4

09486000 RILLITO CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°17'41", long 110°59'00", in SW¼SE¼ sec.14, T.13 S., R.13 E., Pima County, Hydrologic Unit 15050302, on right bank 600 ft downstream from Pima Wash, 1,800 ft downstream from U.S. Highway 89, 5 mi above mouth, and 5.4 mi north of city hall in Tucson.

DRAINAGE AREA.--918 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1915	12-23-14	17,000		1949	09-15-49	1,640	
1916	01-19-16	7,620		1950	07-30-50	9,490	
1917	08-11-17	10,000		1951	07-25-51	9,500	
1918	03-01-18	5,300		1952	11-11-51	1,630	
1919	07-27-19	9,250		1953	07-16-53	5,470	
1920	02-21-20	7,800		1954	07-24-54	7,680	
1921	07-31-21	16,000		1955	07-21-55	8,070	
1922	08-09-22	3,250		1956	07-29-56	2,050	
1923	08-26-23	4,000		1957	01-09-57	4,500	
1924	12-26-23	1,980		1958	08-12-58	8,930	
1925	09-17-25	3,500		1959	08-17-59	7,710	
1926	09-27-26	1,750		1960	01-12-60	3,610	
1927	09-12-27	2,200		1961	07-22-61	4,140	
1928	08-01-28	4,500		1962	09-26-62	2,690	
1929	09-23-29	24,000		1963	08-26-63	7,640	
1930	08-08-30	4,600		1964	09-10-64	9,420	
1931	08-10-31	7,200		1965	09-12-65	754	
1932	07-29-32	7,200		1966	12-22-65	12,400	
1933	09-10-33	4,400		1967	08-19-67	3,100	ES
1934	07-17-34	3,000		1968	02-12-68	7,740	
1935	08-31-35	13,400		1969	08-05-69	2,220	
1936	08-17-36	4,500		1970	09-06-70	7,000	
1937	08-17-37	2,980		1971	08-20-71	9,290	
1938	03-04-38	3,000		1972	08-12-72	1,820	
1939	08-03-39	9,710		1973	10-20-72	5,160	
1940	08-13-40	13,200		1974	08-02-74	1,440	
1941	12-31-40	9,900		1975	07-16-75	2,270	
1942	09-14-42	1,600		1976	09-25-76	9,400	
1943	08-15-43	3,850		1977	09-05-77	1,200	
1944	08-09-44	4,100		1978	03-02-78	7,500	
1945	08-10-45	7,000		1979	00-00-79	16,400	
1946	08-31-46	4,160		1980	00-00-80	2,300	
1947	08-15-47	7,660		1981	00-00-81	4,600	
1948	09-26-48	779		1984	10-02-83	[1]29,700	HP

[1]Highest since 1915.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
45.5	69.7	4,400	22.0	1.5	15.5	1.9	4.0

MEAN MONTHLY AND ANNUAL DISCHARGES 1914, 1916-75

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	116	0.00	2.8	15	5.3	1.7
NOVEMBER	40	0.00	2.0	7.5	3.8	1.2
DECEMBER	556	0.00	18	77	4.2	11.2
JANUARY	603	0.00	18	80	4.5	10.9
FEBRUARY	203	0.00	21	46	2.2	12.6
MARCH	183	0.00	17	37	2.2	10.3
APRIL	13	0.00	0.89	2.8	3.1	0.5
MAY	69	0.00	1.1	8.8	7.8	0.7
JUNE	9.7	0.00	0.54	1.9	3.5	0.3
JULY	500	0.00	29	84	2.9	17.7
AUGUST	263	0.00	37	49	1.3	22.7
SEPTEMBER	302	0.00	17	44	2.7	10.1
ANNUAL	74	0.43	14	17	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1915, 1917-75

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.69	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1915-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,120	9,530	13,100	18,400	22,800	27,700

WEIGHTED SKEW (LOGS)= -0.07
MEAN (LOGS)= 3.70
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914, 1916-75

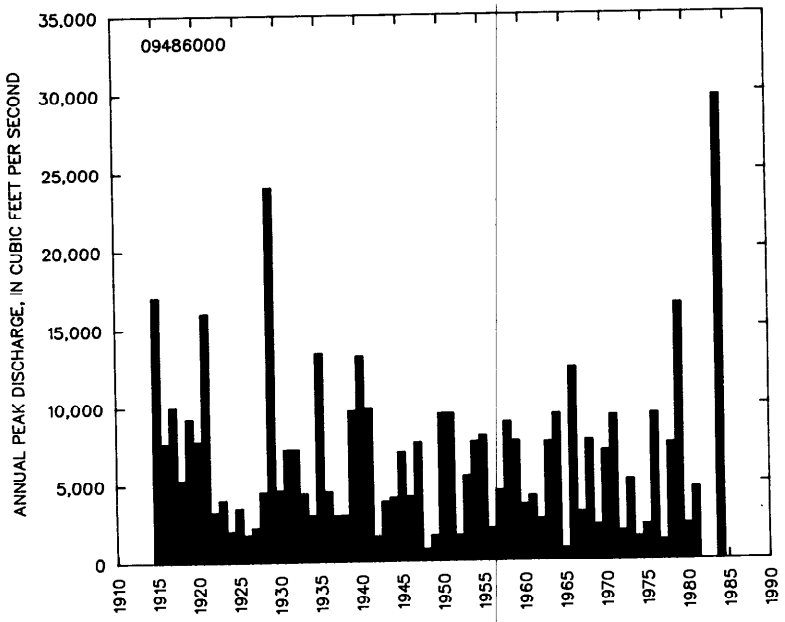
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	863	2,020	3,040	4,560	5,840	7,220
3	380	999	1,630	2,700	3,730	4,960
7	186	493	811	1,370	1,910	2,570
15	104	280	464	786	1,100	1,480
30	62	166	275	463	645	866
60	36	94	154	258	357	476
90	25	68	112	190	266	360

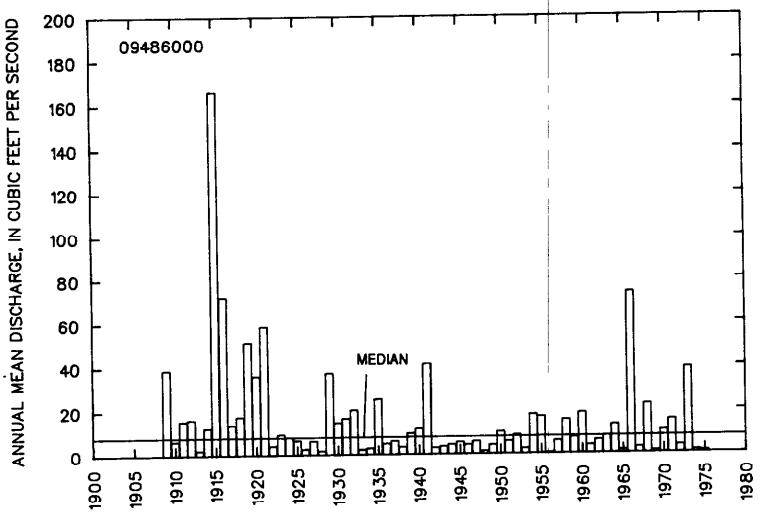
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914, 1916-75

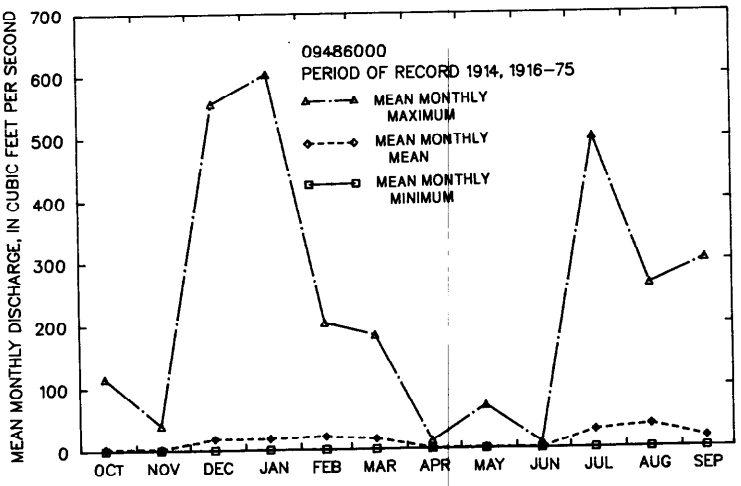
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
330	23	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09486000 RILLITO CREEK NEAR TUCSON, AZ--CONTINUED







09486300 CANADA DEL ORO NEAR TUCSON, AZ

LOCATION.--Lat 32°22'27", long 111°00'31", in SW¼NW¼ sec.22, T.12 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank at upstream side of Overton Road, 4.7 mi upstream from mouth, and 10.5 mi north of city hall in Tucson.

DRAINAGE AREA.--250 mi^2.

REMARKS.--Lago del Oro—capacity 9,400 acre-ft—16 mi upstream, has contained no storage since May 4, 1971, as gates were opened by court order; however, peak flows are regulated while passing through the lake.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1959	07-21-59	[1]17,000	ES,HP
1961	09-01-61	12,000	ES,HP
1964	09-10-64	8,000	ES,HP
1966	12-22-65	2,290	
1967	08-05-67	652	
1968	12-20-67	[2]13,900	
1969	07-22-69	454	
1970	08-18-70	1,930	
1971	08-17-71	4,200	
1972	08-12-72	728	
1973	10-19-72	3,750	
1974	07-20-74	7,700	
1975	09-04-75	454	
1976	09-05-76	2,220	
1977	08-09-77	4,500	
1978	01-16-78	2,070	
1979	11-25-78	1,380	
1980	07-19-80	4,240	
1981	07-25-81	5,900	
1984	10-01-83	6,600	

[1]Highest since 1950.
[2]Highest since 1959.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
108	28.4	4,000	21.0	2.0	16.4	2.0	4.7

09486300 CANADA DEL ORO NEAR TUCSON, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	19	0.00	2.0	5.5	2.7	10.0
NOVEMBER	0.00	0.00	0.00	0.00		0.0
DECEMBER	88	0.00	9.8	26	2.6	49.1
JANUARY	6.2	0.00	0.48	1.7	3.6	2.4
FEBRUARY	2.5	0.00	0.34	0.79	2.3	1.7
MARCH	5.9	0.00	0.47	1.7	3.5	2.4
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	0.00	0.00	0.00	0.00		0.0
JULY	13	0.00	1.2	3.6	2.9	6.2
AUGUST	30	0.00	3.5	8.3	2.4	17.4
SEPTEMBER	14	0.00	2.2	3.9	1.8	10.9
ANNUAL	7.5	0.06	1.7	2.0	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120						
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1959, 1961, 1966-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
2,650	6,150	9,340	14,400	18,800	23,900

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 3.41
STANDARD DEV. (LOGS)= 0.45

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-78

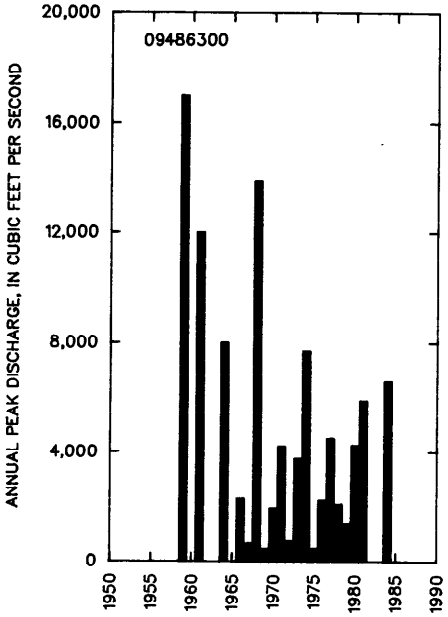
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	140	526	1,030	2,100	3,300	4,940
3	57	232	468	963	1,520	2,260
7	27	109	217	440	684	1,010
15	13	54	108	219	339	497
30	7.7	29	55	105	155	216
60	4.6	16	29	51	72	97
90	3.2	11	19	33	47	63

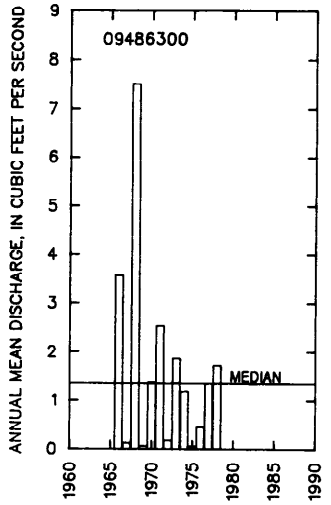
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-78

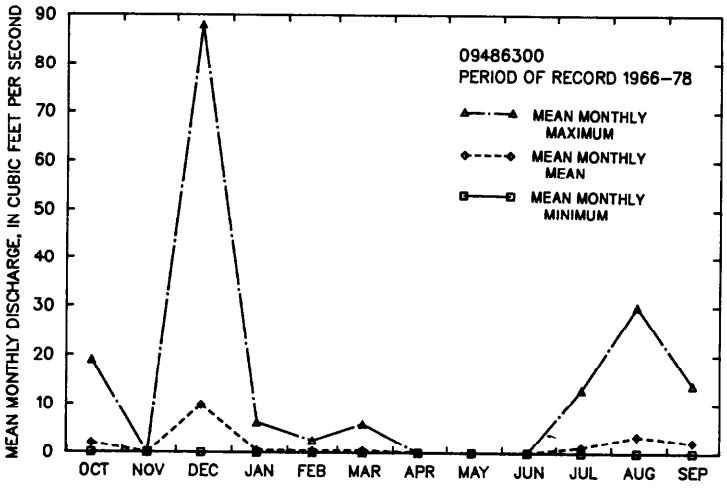
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09486300 CANADA DEL ORO NEAR TUCSON, AZ--CONTINUED







09486500 SANTA CRUZ RIVER AT CORTARO, AZ

LOCATION.--Lat 32°21'04", long 111°05'38", in NW¼NW¼ sec.35, T.12 S., R.12 E., Pima County, Hydrologic Unit 15050302, on downstream side of right bridge pier 0.5 mi southwest of Cortaro, 2.6 mi downstream from Canada del Oro, and 3.7 mi downstream from Rillito Creek.

DRAINAGE AREA.--3,503 mi^2, of which 395 mi^2 is in Mexico.

REMARKS.--Many diversions above station, mostly by pumping from ground water, for irrigation of about 34,000 acres. Wastewater from irrigation and from sewage-disposal plants is included in flow past station in water years 1951, 1952, and 1970-82.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	08-14-40	[1]17,000		1964	09-10-64	15,900	
1941	12-31-40	7,800		1965	07-16-65	2,710	
1942	08-09-42	1,550		1966	12-22-65	16,800	
1943	09-24-43	5,500		1967	07-17-67	5,740	
1944	08-16-44	5,650		1968	12-21-67	15,800	
1945	08-10-45	14,000		1969	08-06-69	8,400	
1946	08-04-46	4,440		1970	07-20-70	11,200	
1947	08-15-47	7,500		1971	08-20-71	9,100	
1950	07-30-50	12,900		1972	08-12-72	7,050	
1951	07-25-51	6,820		1973	10-19-72	9,000	
1952	08-14-52	6,100		1974	07-08-74	11,700	
1953	07-14-53	10,800		1975	07-12-75	5,200	
1954	07-24-54	9,150		1976	09-25-76	10,600	
1955	08-03-55	16,600		1977	09-10-77	4,700	
1956	07-29-56	3,150		1978	10-10-77	23,000	
1957	09-01-57	4,400		1979	12-18-78	18,800	
1958	08-12-58	7,890		1980	07-19-80	2,650	
1959	08-20-59	8,000		1981	09-22-81	4,310	
1960	08-11-60	6,420		1982	08-23-82	13,300	
1961	08-23-61	14,700		1983	02-04-83	7,620	
1962	09-26-62	11,200		1984	10-02-83	[2]65,000	HP
1963	08-26-63	7,240		1985	12-28-84	13,000	

[1]Highest since 1935.
[2]Highest since 1914.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
20.3	140	4,000	18.0	1.8	16.3	2.0	4.2

09486500 SANTA CRUZ RIVER AT CORTARO, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1940-46, 1951-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	744	0.00	39	122	3.2	7.1
NOVEMBER	168	0.00	17	31	1.8	3.1
DECEMBER	1,040	0.00	85	233	2.7	15.6
JANUARY	756	0.00	45	125	2.8	8.2
FEBRUARY	192	0.00	32	50	1.5	5.9
MARCH	496	0.00	34	83	2.4	6.3
APRIL	53	0.00	10	17	1.6	1.9
MAY	48	0.00	9.8	16	1.6	1.8
JUNE	44	0.00	12	16	1.4	2.1
JULY	393	1.7	77	84	1.1	14.1
AUGUST	868	2.0	131	150	1.1	23.9
SEPTEMBER	358	0.00	54	71	1.3	10.0
ANNUAL	198	2.6	46	41	0.89	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-47, 1952-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.03	0.00	0.00	0.00	0.00	0.00
120	2.2	0.00	0.00	0.00	0.00	0.00
183	8.0	1.1	0.26	0.05	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1940-47, 1950-85

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
8,390	13,900	18,100	24,300	29,400	35,000

WEIGHTED SKEW (LOGS)= 0.12
MEAN (LOGS)= 3.93
STANDARD DEV. (LOGS)= 0.25

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1940-46, 1951-82

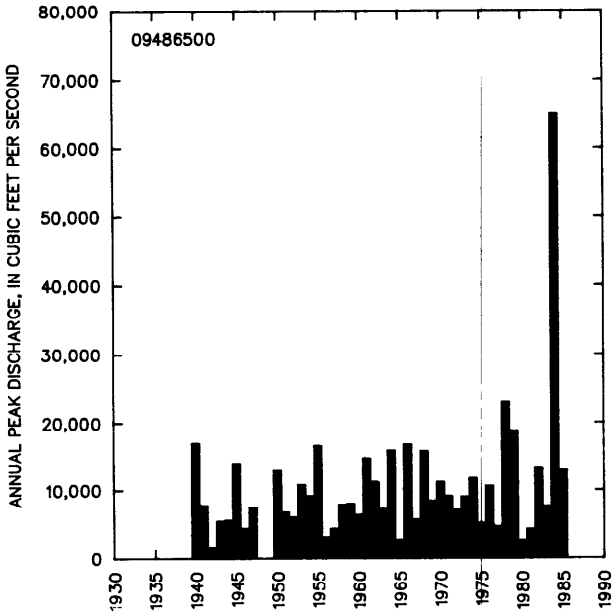
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	2,070	4,710	7,170	11,100	14,700	18,900
3	1,050	2,420	3,710	5,830	7,790	10,100
7	560	1,270	1,910	2,910	3,780	4,760
15	332	727	1,060	1,540	1,940	2,370
30	212	448	636	899	1,110	1,320
60	133	275	386	537	655	774
90	98	203	281	384	461	537

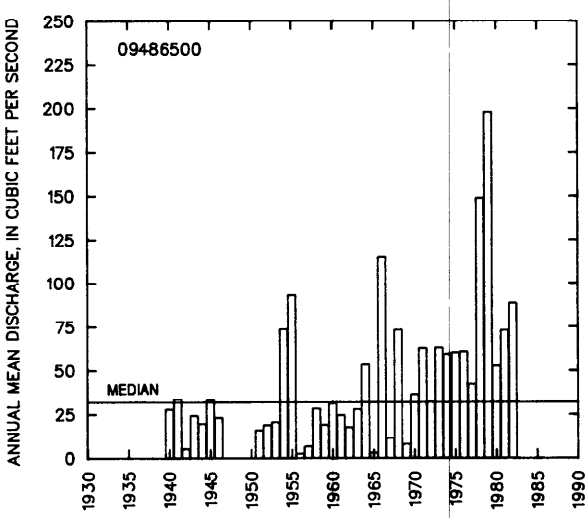
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-46, 1951-82

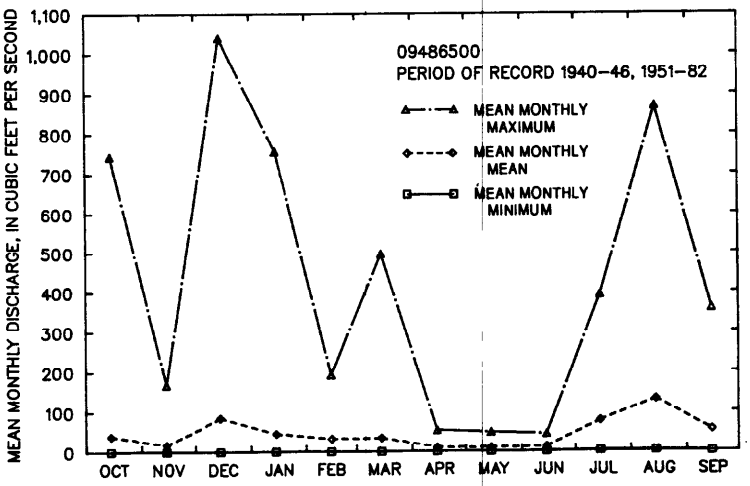
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
843	105	57	46	39	23	1.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09486500 SANTA CRUZ RIVER AT CORTARO, AZ--CONTINUED







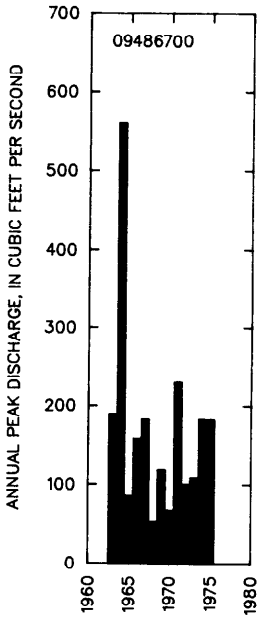
09486700 CHILTEPINES WASH NEAR SASABE, AZ

LOCATION.--Lat 31°49'08", long 111°26'16", in NE¼SE¼ sec.32, T.18 S., R.9 E., Pima County, Hydrologic Unit 15050304, at State Highway 286, 24 mi north of Sasabe.

DRAINAGE AREA.--7.13 mi^2, contributing drainage area not determined.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-05-63	189
1964	09-10-64	560
1965	09-15-65	85
1966	08-19-66	158
1967	00-00-67	182
1968	00-00-68	53
1969	00-00-69	118
1970	09-04-70	67
1971	08-03-71	230
1972	08-00-72	100
1973	07-15-73	108
1974	08-04-74	182
1975	09-04-75	182



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
116	7.2	3,660	0.8	3.0	13.0	2.2	4.0

09486800 ALTAR WASH NEAR THREE POINTS, AZ

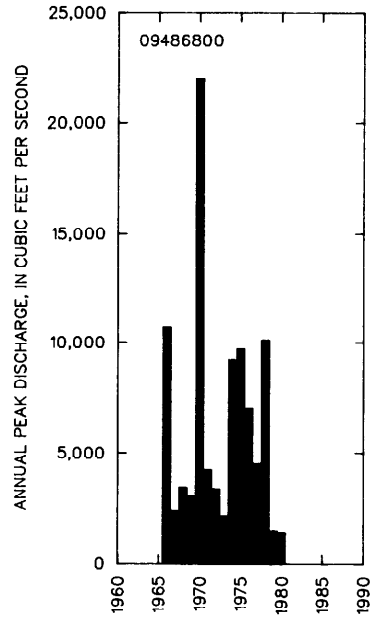
LOCATION.--Lat 31°50'10", long 111°24'11", in SE¼NE¼ sec.27, T.18 S., R.9 E., Pima County, Hydrologic Unit 15050304, on left abutment of former highway bridge, 0.1 mi downstream from Chiltipines Wash, 0.2 mi upstream from bridge on State Highway 286, and 18 mi south of Three Points.

DRAINAGE AREA.--465 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	08-10-66	10,700
1967	07-15-67	2,360
1968	08-02-68	3,430
1969	07-18-69	3,060
1970	09-04-70	[1]22,000
1971	08-03-71	4,220
1972	07-15-72	3,360
1973	07-14-73	2,130
1974	08-04-74	9,200
1975	08-08-75	9,700
1976	08-22-76	7,000
1977	07-00-77	4,500
1978	10-06-77	10,100
1979	11-25-78	1,480
1980	08-13-80	1,400

[1]Highest since 1940.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
4,300	7,920	10,900	15,400	19,300	23,600

WEIGHTED SKEW (LOGS)= 0.03
MEAN (LOGS)= 3.64
STANDARD DEV. (LOGS)= 0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
74.1	32.4	3,920	6.5	2.0	15.6	2.2	5.0

09487000 BRAWLEY WASH NEAR THREE POINTS, AZ

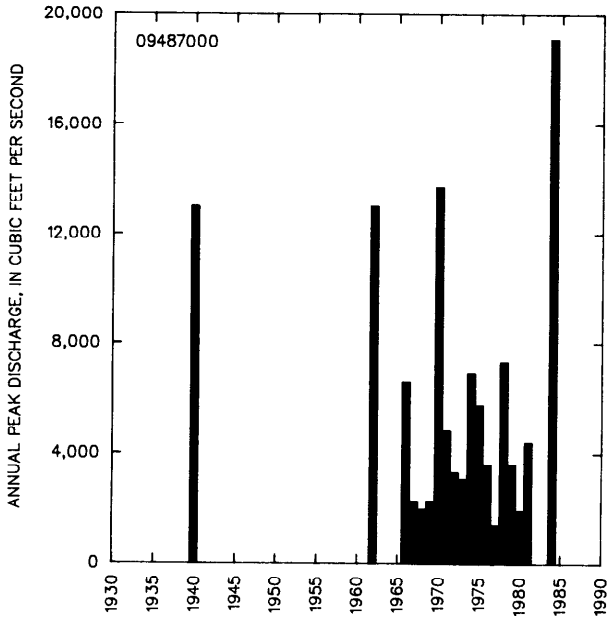
LOCATION.--Lat 32°04'32", long 111°20'15", in NE¼SE¼ sec.32, T.15 S., R.10 E., Pima County, Hydrologic Unit 15050304, at State Highway 86, 1.5 mi west of Three Points (Robles Junction), and 23 mi west of Tucson.

DRAINAGE AREA.--776 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	08-14-40	13,000	ES,HP
1962	09-26-62	[1]13,000	HP
1966	12-24-65	6,600	DF
1967	07-17-67	2,250	
1968	12-21-67	1,950	
1969	07-18-69	2,250	
1970	09-04-70	[1]13,700	
1971	08-03-71	4,830	
1972	07-15-72	3,300	
1973	07-14-73	3,060	
1974	08-04-74	6,910	
1975	08-00-75	5,750	
1976	09-05-76	3,600	
1977	07-26-77	1,400	ES
1978	10-06-77	7,300	
1979	11-25-78	3,600	
1980	08-13-80	1,900	
1981	07-13-81	4,400	
1984	10-01-83	19,100	HP

[1]Highest since 1955.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-81, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
3,660	6,400	8,750	12,400	15,700	19,500

WEIGHTED SKEW (LOGS)= 0.34
MEAN (LOGS)= 3.58
STANDARD DEV. (LOGS)= 0.28

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
30.8	53.8	3,710	6.0	2.0	14.6	2.2	4.5

09487100 LITTLE BRAWLEY WASH NEAR THREE POINTS, AZ

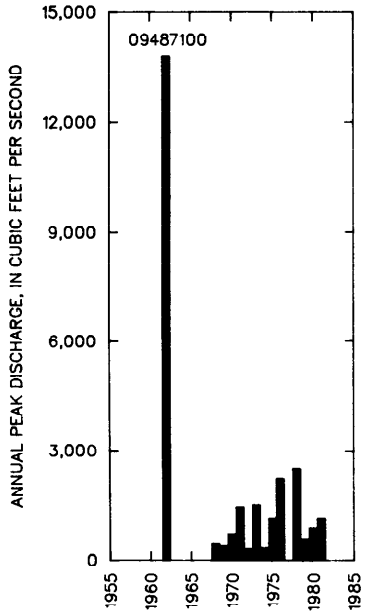
LOCATION.--Lat 32°07'25", long 111°19'45", in SE¼NW¼ sec.16, T.15 S., R.10 E., Pima County, Hydrologic Unit 15050304, 3.4 mi north of Three Points.

DRAINAGE AREA.--11.9 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	09-26-62	[1]13,800	HP
1968	08-00-68	450	
1969	08-16-69	388	
1970	00-00-70	700	
1971	00-00-71	1,440	
1972	00-00-72	310	
1973	00-00-73	1,500	
1974	00-00-74	335	
1975	08-00-75	1,150	
1976	09-25-76	2,230	
1977	00-00-77	0	
1978	10-06-77	2,500	
1979	08-15-79	566	
1980	06-30-80	893	
1981	09-05-81	1,150	

[1]Highest since 1462.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962, 1968-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
777	1,450	2,010	2,860	3,600	4,440

WEIGHTED SKEW (LOGS)= 0.05
MEAN (LOGS)= 2.89
STANDARD DEV. (LOGS)= 0.32

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
112	5.9	2,800	0.0	3.0	13.0	2.1	4.7

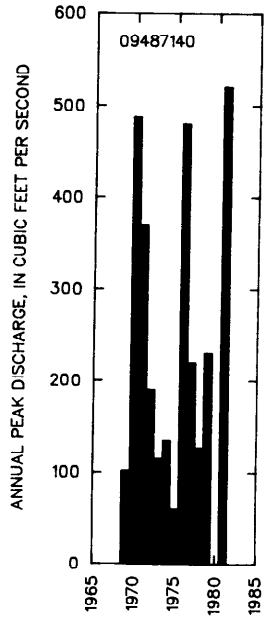
09487140 SAN JOAQUIN WASH NEAR TUCSON, AZ

LOCATION.--Lat 32°10'07", long 111°07'58", in NE¼SE¼ sec.32, T.14 S., R.12 E., Pima County, Hydrologic Unit 15050301, 1.1 mi northwest of the intersection of San Joaquin Road and the Tucson-Ajo Highway.

DRAINAGE AREA.--0.45 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1969	08-02-69	102
1970	07-19-70	487
1971	08-17-71	370
1972	10-17-71	190
1973	07-00-73	115
1974	07-00-74	135
1975	08-20-75	60
1976	09-25-76	480
1977	07-22-77	220
1978	01-15-78	127
1979	11-24-78	230
1980	00-00-80	0
1981	07-28-81	520



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
191	356	486	672	824	987

WEIGHTED SKEW (LOGS)= -0.17
MEAN (LOGS)= 2.27
STANDARD DEV. (LOGS)= 0.33

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
69.3	2.5	2,530	0.0	3.0	11.0	2.1	4.7

09487250 LOS ROBLES WASH NEAR MARANA, AZ

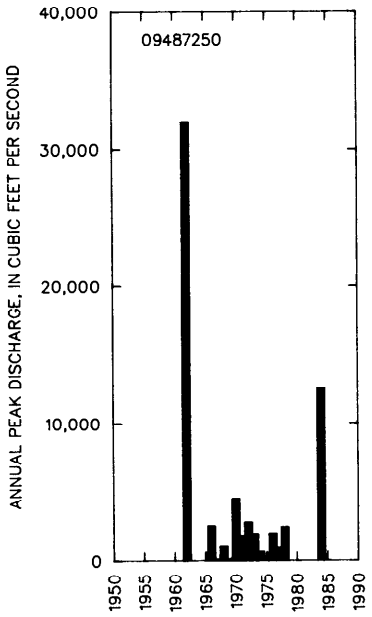
LOCATION.--Lat 32°26'16", long 111°18'13", in SE¼SE¼ sec.27, T.11 S., R.10 E., Pima County, Hydrologic Unit 15050304, at Trico Road, 0.75 mi downstream from confluence of Brawley Wash and China Draw, 3 mi upstream from Blanco Wash, and 5 mi southwest of Marana.

DRAINAGE AREA.--1,170 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	09-26-62	[1]32,000	HP
1966	00-00-66	2,500	
1967	07-17-67	80	
1968	12-20-67	1,000	
1969	09-09-69	105	
1970	09-05-70	[2]4,490	
1971	08-18-71	1,770	
1972	08-00-72	2,750	
1973	10-19-72	1,910	
1974	07-08-74	630	
1975	08-09-75	260	
1976	09-25-76	1,950	
1977	00-00-77	900	
1978	10-06-77	2,400	
1984	10-02-83	12,500	HP

[1]Highest since 1885.
[2]Highest since 1963.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962, 1966-78, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,140	3,090	4,900	7,670	10,000	12,500

WEIGHTED SKEW (LOGS)= -0.52
MEAN (LOGS)= 3.01
STANDARD DEV. (LOGS)= 0.56

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
25.9	77.2	3,350	4.0	2.0	11.8	2.2	4.5

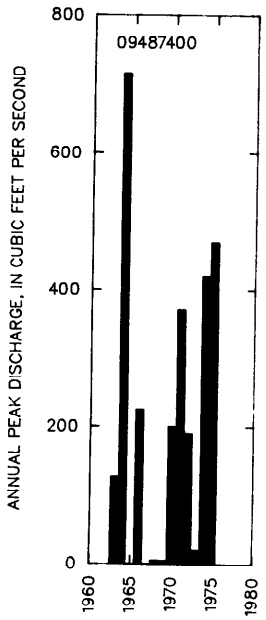
09487400 QUIJOTOA WASH TRIBUTARY NEAR QUIJOTOA, AZ

LOCATION.--Lat 32°10'25", long 112°06'30", Pima County, Hydrologic Unit 15050306, on the Papago Indian Reservation, at the Quijotoa-Casa Grande Road, and 1.1 mi north of Quijotoa.

DRAINAGE AREA.--2.44 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	127	
1964	07-24-64	715	
1965	00-00-65	0	
1966	08-00-66	225	
1967	00-00-67	0	
1968	12-00-67	5.0	LT
1969	08-05-69	5.0	LT
1970	08-00-70	200	
1971	00-00-71	370	
1972	07-00-72	190	
1973	08-17-73	20	ES
1974	09-26-74	420	
1975	08-26-75	470	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
168	370	546	813	1,040	1,300

WEIGHTED SKEW (LOGS)= -0.26
MEAN (LOGS)= 2.21
STANDARD DEV. (LOGS)= 0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
88.9	3.6	2,800	0.0	1.0	10.1	2.1	4.9

09488500 SANTA ROSA WASH NEAR VAIVA VO, NEAR SELLS, AZ

LOCATION.--Lat 32°40'03", long 111°55'39", in SW¼SW¼ sec.2, T.9 S., R.4 E., Pinal County, Hydrologic Unit 15050306, in Papago Indian Reservation, on right bank about 1 mi downstream from Tat Momolikot Dam, 3.3 mi south of Vaiva Vo, 10 mi southwest of Chuichu, 12 mi downstream from Gu Komelik and 52 mi north of Sells.

Beginning July 1974, floodflows are regulated by Lake St. Clair, formed by Tat Momolikot Dam—total capacity 384,000 acre-ft.

DRAINAGE AREA.--1,782 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1955	08-08-55	1,150	
1956	07-24-56	740	
1957	08-12-57	492	
1958	11-01-57	10,000	
1959	07-13-59	4,120	
1960	07-30-60	805	
1961	07-27-61	892	
1962	09-27-62	[1]53,100	
1963	09-14-63	4,180	
1964	07-25-64	6,760	
1965	09-04-65	433	
1966	09-14-66	1,820	
1967	06-26-67	302	
1968	07-28-68	840	
1969	08-08-69	514	
1970	08-10-70	865	
1971	08-04-71	6,110	
1972	08-14-72	410	
1973	10-21-72	762	
1974	08-02-74	364	KR
1975	07-17-75	580	KR
1976	09-25-76	390	KR
1977	07-17-77	291	KR
1978	02-13-78	66	KR
1979	01-17-79	51	KR
1980	08-24-80	105	KR
1984	10-04-83	1,890	HP,KR

[1]Highest since 1885.

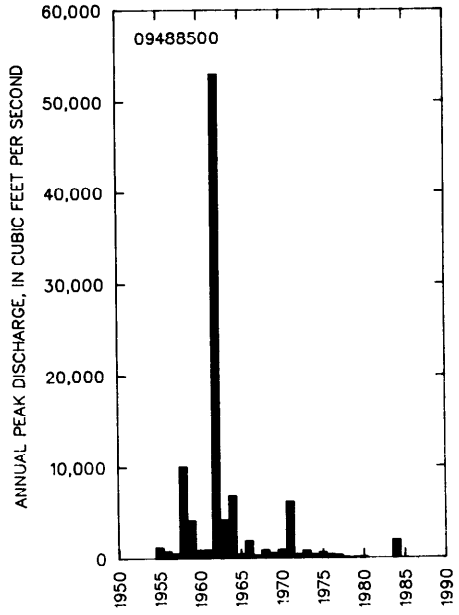
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1955-74

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
808	3,160	6,250	12,600	19,700	29,000

WEIGHTED SKEW (LOGS)= -0.20
MEAN (LOGS)= 2.88
STANDARD DEV. (LOGS)= 0.72

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
25.5	55.0	2,340	0.3	2.0	10.2	1.9	4.3

09488600 SILVER REEF WASH NEAR CASA GRANDE, AZ

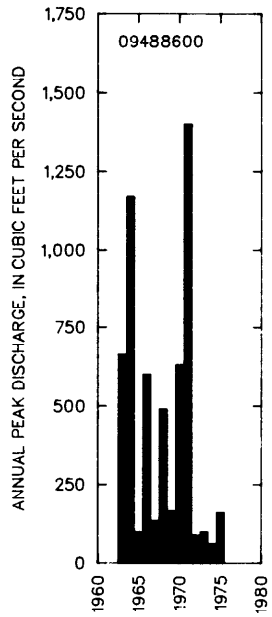
LOCATION.--Lat 32°40'56", long 111°50'03", in SW¼SE¼ sec.34, T.8 S., R.5 E., Pinal County, Hydrologic Unit 15050306, at Quijotoa-Casa Grande Road, 14 mi southwest of Casa Grande.

DRAINAGE AREA.--12.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1950	00-00-50	([1])	HP
1963	08-21-63	662	
1964	08-12-64	1,170	
1965	09-00-65	100	ES
1966	12-00-65	600	
1967	00-00-67	135	
1968	12-19-67	490	
1969	08-11-69	165	
1970	00-00-70	630	
1971	08-03-71	1,400	
1972	08-12-72	90	
1973	00-00-73	100	ES
1974	09-00-74	60	
1975	10-28-74	160	

[1]Discharge unknown.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
268	663	1,070	1,780	2,480	3,340

WEIGHTED SKEW (LOGS)=	0.03
MEAN (LOGS)=	2.43
STANDARD DEV. (LOGS)=	0.47

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
67.4	8.6	1,620	0.0	3.0	8.5	1.6	4.1

09489000 SANTA CRUZ RIVER NEAR LAVEEN, AZ

LOCATION.--Lat 33°13'56", long 112°10'08", in NE¼NE¼ sec.29, T.2 S., R.2 E., Pinal County, Hydrologic Unit 15050303, in Gila River Indian Reservation, on downstream side of highway bridge, 3.4 mi upstream from mouth, 4.3 mi south of Komatke, and 9 mi south of Laveen.

DRAINAGE AREA.--8,581 mi^2.

REMARKS.--Many diversions above station, mostly by pumping from ground water for municipal uses and for irrigation of about 240,000 acres, not including San Carlos Project. Much of the low flow passing this station is drainage and wasteway return from irrigated lands upstream and pumpage from ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1940	09-18-40	1,200	UR	1966	12-26-65	2,940	UR
1941	03-15-41	1,580	UR	1967	09-06-67	448	UR
1942	07-15-42	1,890	UR	1968	12-23-67	3,820	UR
1943	09-28-43	1,200	UR	1969	11-14-68	152	UR
1944	02-25-44	217	UR	1970	09-09-70	1,010	UR
1945	08-11-45	1,200	UR	1971	08-22-71	2,440	UR
1946	09-21-46	5,020	UR	1972	08-07-72	112	UR
1948	08-07-48	1,200	UR	1973	10-22-72	1,650	UR
1949	09-17-49	1,780	UR	1974	07-20-74	144	KR
1950	08-11-50	685	UR	1975	07-14-75	203	KR
1951	08-28-51	5,060	UR	1976	09-25-76	583	KR
1952	08-15-52	1,860	UR	1977	10-23-76	472	KR
1953	07-17-53	555	UR	1978	10-13-77	2,010	KR
1954	08-09-54	726	UR	1979	12-22-78	4,120	KR
1955	08-10-55	2,180	UR	1980	02-20-80	115	KR
1956	01-30-56	90	UR	1981	07-16-81	368	KR
1957	08-20-57	1,040	UR	1982	09-15-82	751	KR
1958	11-03-57	3,360	UR	1983	03-08-83	1,910	KR
1959	08-12-59	3,010	UR	1984	10-04-83	33,000	KR
1960	01-15-60	707	UR	1985	12-31-84	2,030	KR
1961	08-15-61	547	UR	1986	07-21-86	456	KR
1962	09-29-62	9,200	UR	1987	02-25-87	110	KR
1963	08-17-63	608	UR	1988	08-27-88	310	KR
1964	08-14-64	2,520	UR	1989	10-15-88	688	KR
1965	06-23-65	309	UR				

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
15.2	241	3,060	7.8	2.0	13.0	1.9	4.2

09489000 SANTA CRUZ RIVER NEAR LAVEEN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1975-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,810	0.00	131	466	3.6	46.7
NOVEMBER	26	0.00	2.4	6.5	2.7	0.9
DECEMBER	248	0.00	27	66	2.4	9.8
JANUARY	455	0.00	43	118	2.8	15.2
FEBRUARY	186	0.00	23	49	2.1	8.2
MARCH	160	0.00	19	46	2.5	6.6
APRIL	6.6	0.00	0.95	1.7	1.8	0.3
MAY	6.8	0.00	0.72	1.8	2.5	0.3
JUNE	2.3	0.00	0.17	0.59	3.5	0.1
JULY	41	0.00	5.7	11	1.9	2.0
AUGUST	129	0.00	16	33	2.0	5.8
SEPTEMBER	53	0.00	12	18	1.5	4.1
ANNUAL	170	0.47	24	45	1.9	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1976-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	1.4	0.22	0.07	0.03	0.01	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1975-89

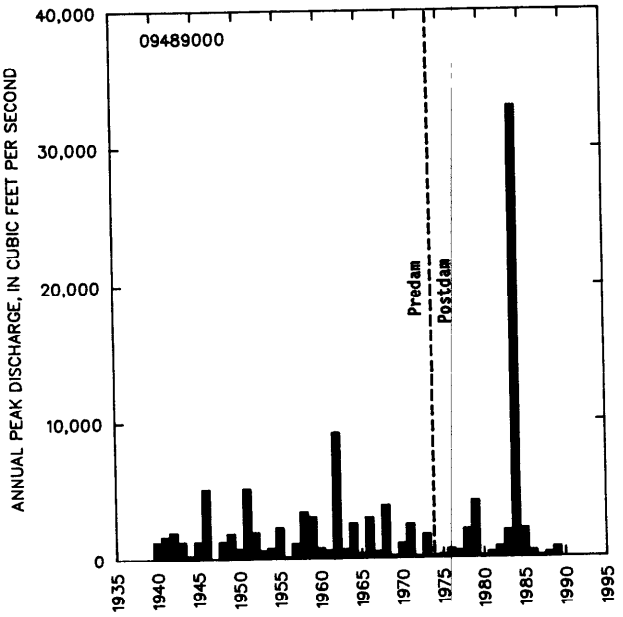
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	359	1,620	4,050	12,000	25,500	52,500
3	203	1,070	2,930	9,560	21,800	47,800
7	111	558	1,480	4,660	10,400	22,200
15	58	294	778	2,420	5,340	11,300
30	35	179	463	1,380	2,940	5,950
60	24	121	307	869	1,760	3,370
90	17	84	209	584	1,170	2,220

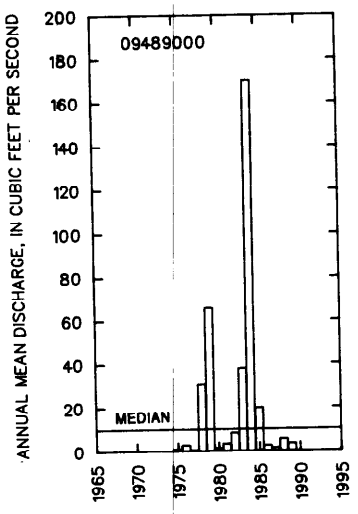
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1975-89

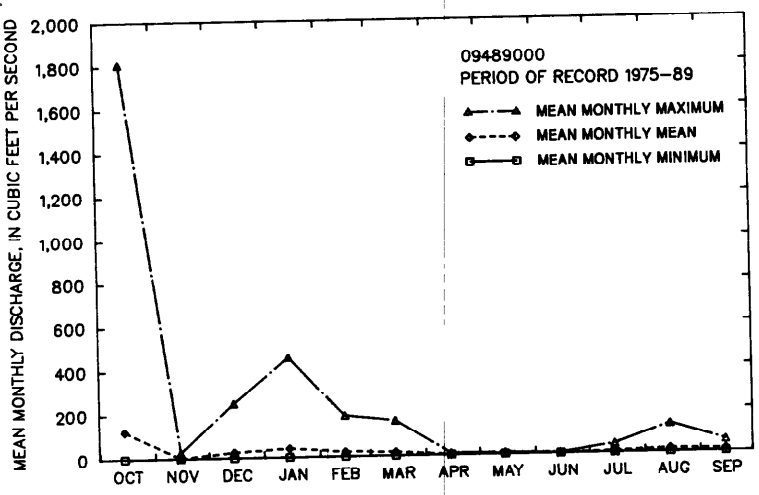
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
403	28	7.0	3.4	1.8	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09489000 SANTA CRUZ RIVER NEAR LAVEEN, AZ--CONTINUED







09489070 NORTH FORK OF EAST FORK BLACK RIVER NEAR ALPINE, AZ

LOCATION.--Lat 33°54'11", long 109°19'20", in SW¼NE¼ sec.19, T.6 N., R.29 E. (unsurveyed), Apache County, Hydrologic Unit 15060101, in Apache National Forest, on right bank 1.4 mi downstream from Crosby Crossing and 12 mi northwest of Alpine.

DRAINAGE AREA.--38.1 mi^2.

REMARKS.--Minor storage at headwaters for recreation and stock purposes; the largest is Big Lake. No diversions above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	04-03-66	556
1967	08-10-67	27
1968	04-15-68	515
1969	04-06-69	366
1970	04-06-70	142
1971	03-12-71	39
1972	10-25-71	218
1973	04-17-73	1,070
1974	03-29-74	77
1975	04-25-75	577
1976	04-05-76	283
1977	04-08-77	332
1978	03-31-78	383

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
48.8	10.1	9,060	24.0	3.0	27.5	2.4	4.4

09489070 NORTH FORK OF EAST FORK BLACK RIVER NEAR ALPINE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	33	0.83	5.8	9.9	1.7	3.8
NOVEMBER	8.7	0.67	3.0	2.9	0.97	1.9
DECEMBER	16	0.33	2.5	4.2	1.7	1.6
JANUARY	13	0.20	1.9	3.3	1.7	1.3
FEBRUARY	15	0.20	2.7	4.1	1.5	1.8
MARCH	103	2.4	23	29	1.2	15.1
APRIL	362	1.2	83	102	1.2	54.0
MAY	134	0.49	21	37	1.8	13.5
JUNE	9.8	0.29	2.0	2.5	1.2	1.3
JULY	4.7	0.41	1.8	1.2	0.69	1.1
AUGUST	13	0.56	3.9	3.9	1.0	2.5
SEPTEMBER	13	0.38	3.0	3.5	1.2	2.0
ANNUAL	50	1.2	13	13	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.37	0.24	0.20	0.17	0.14	0.13
3	0.39	0.25	0.21	0.17	0.14	0.13
7	0.40	0.27	0.22	0.19	0.16	0.15
14	0.42	0.29	0.24	0.21	0.18	0.16
30	0.47	0.31	0.25	0.22	0.18	0.16
60	0.55	0.36	0.28	0.23	0.19	0.16
90	0.62	0.40	0.31	0.25	0.20	0.18
120	0.66	0.46	0.41	0.38	0.36	0.35
183	0.96	0.75	0.70	0.68	0.66	0.66

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
306	553	741	1,000	1,210	1,420

WEIGHTED SKEW (LOGS)= -0.24
MEAN (LOGS)= 2.47
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1966-78

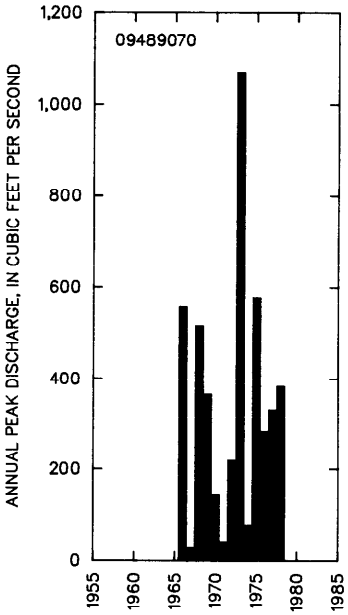
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	150	380	592	916	1,190	1,500
3	130	340	539	858	1,140	1,460
7	105	286	462	751	1,010	1,310
15	76	217	362	607	833	1,100
30	52	157	269	465	654	880
60	34	98	164	277	384	509
90	26	71	115	186	250	321

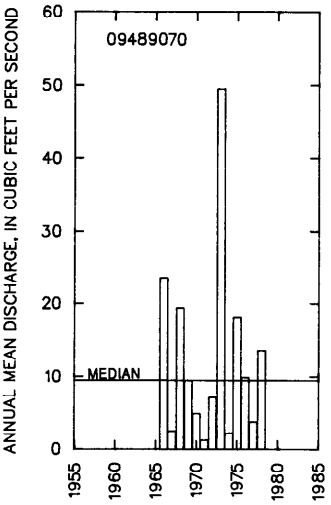
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-78

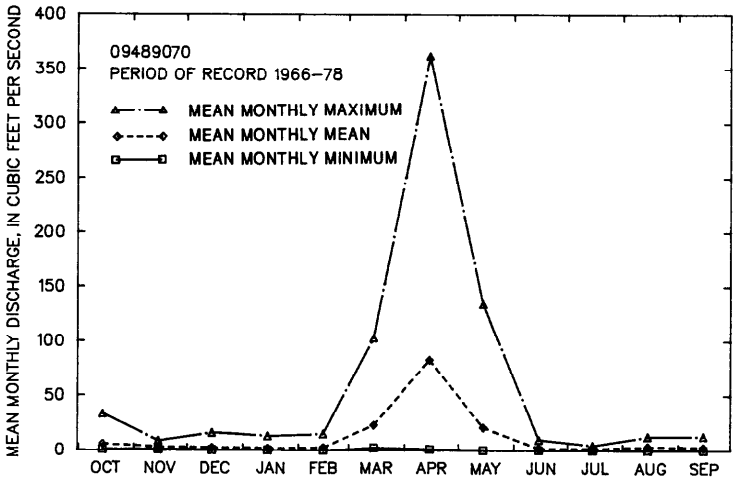
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
253	53	22	12	6.7	3.4	2.2	1.5	1.2	0.91	0.66	0.46	0.33	0.26	0.23	0.21	0.20

† Reliability of values in column is uncertain, and potential errors are large.

09489070 NORTH FORK OF EAST FORK BLACK RIVER NEAR ALPINE, AZ--CONTINUED







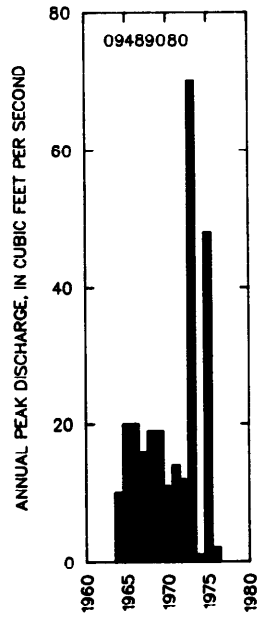
09489080 HANNAGAN CREEK NEAR HANNAGAN MEADOW, AZ

LOCATION.--Lat 33°38'58", long 109°17'04", Greenlee County, at U.S. Highway 666, 2.7 mi northeast of Hannagan Meadow.

DRAINAGE AREA.--1.61 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1964	09-21-64	10
1965	04-22-65	20
1966	04-04-66	20
1967	08-11-67	16
1968	04-00-68	19
1969	09-03-69	19
1970	04-00-70	11
1971	09-30-71	14
1972	10-25-71	12
1973	10-19-72	70
1974	04-24-74	1.0
1975	09-00-75	48
1976	08-00-76	2.0



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
16.5	29	39.7	56.1	70.6	87.3

WEIGHTED SKEW (LOGS)= 0.27
MEAN (LOGS)= 1.23
STANDARD DEV. (LOGS)= 0.28

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
68.6	2.0	9,160	90.0	3.0	30.0	2.4	4.0

GILA RIVER BASIN

09489100 BLACK RIVER NEAR MAVERICK, AZ

LOCATION.--Lat 33°12'27", long 109°26'48", in SW¼ sec.30, T.4 N., R.28 E., Apache County, Hydrologic Unit 15060101, in Apache National Forest, on right bank 1.0 mi downstream from Fish Creek, 1.1 mi upstream from Conklin Creek, and 6 mi southeast of Maverick.

DRAINAGE AREA.--315 mi^2.

REMARKS.--Minor storage for recreational and stock purposes near headwaters. No diversion above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-10-63	911	
1964	09-15-64	946	
1965	04-21-65	2,010	
1966	04-02-66	2,300	
1967	08-12-67	1,040	
1968	04-16-68	1,890	
1969	04-07-69	1,740	
1970	09-06-70	402	
1971	08-29-71	580	
1972	10-24-71	2,910	
1973	10-20-72	11,100	
1974	03-31-74	342	
1975	03-08-75	2,360	
1976	04-05-76	714	
1977	04-10-77	700	
1978	03-01-78	2,390	
1979	12-18-78	10,300	
1980	04-21-80	3,400	
1982	04-13-82	1,550	
1984	10-02-83	[1]14,000	HP

[1]Highest since 1954.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
69.4	38.4	8,700	82.0	3.0	27.2	2.4	4.8

09489100 BLACK RIVER NEAR MAVERICK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1963-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	726	20	91	173	1.9	5.4
NOVEMBER	219	18	60	62	1.0	3.6
DECEMBER	609	15	72	134	1.9	4.2
JANUARY	205	18	61	60	0.99	3.6
FEBRUARY	290	21	99	86	0.87	5.8
MARCH	934	44	307	262	0.85	18.1
APRIL	1,480	32	559	462	0.83	33.0
MAY	1,330	22	224	309	1.4	13.2
JUNE	147	17	45	37	0.82	2.6
JULY	107	21	38	22	0.58	2.2
AUGUST	224	24	66	44	0.68	3.9
SEPTEMBER	274	21	72	70	0.97	4.3
ANNUAL	392	37	141	98	0.70	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1964-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	14	12	11	10	9.3	8.8
3	15	13	12	12	11	11
7	16	14	13	12	11	11
14	17	15	14	14	13	13
30	19	17	16	15	14	14
60	21	19	18	17	16	16
90	23	20	19	18	17	16
120	25	21	20	19	18	18
183	35	27	24	21	20	18

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-80, 1982, 1984

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,620	3,860	6,220	10,500	14,900	20,500

WEIGHTED SKEW (LOGS)= 0.23
MEAN (LOGS)= 3.23
STANDARD DEV. (LOGS)= 0.43

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1963-82

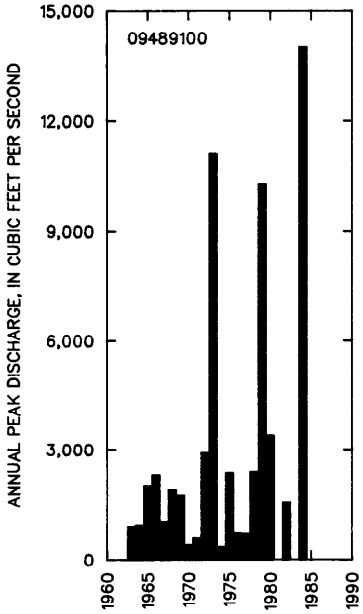
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,030	2,220	3,380	5,350	7,250	9,580
3	925	1,900	2,770	4,140	5,360	6,770
7	791	1,510	2,080	2,890	3,550	4,260
15	647	1,270	1,780	2,520	3,140	3,810
30	512	1,040	1,490	2,170	2,750	3,400
60	373	757	1,080	1,560	1,960	2,400
90	294	597	848	1,220	1,520	1,860

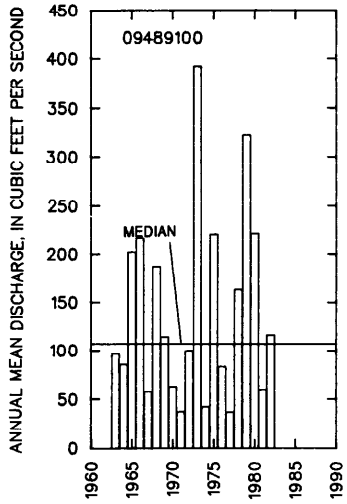
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1963-82

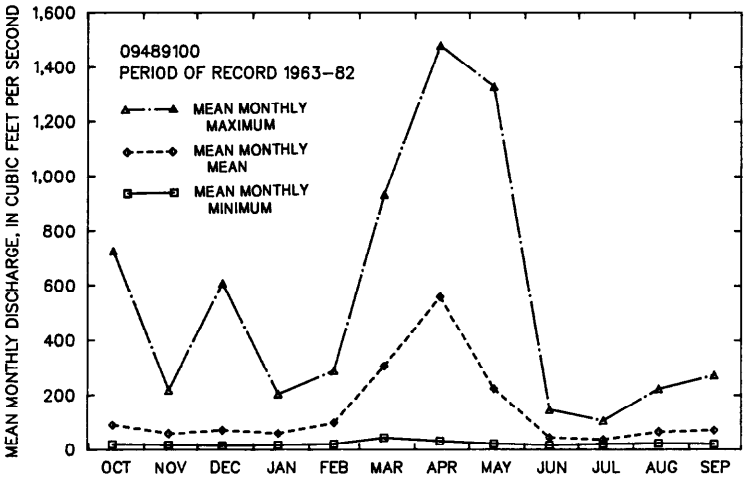
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,600	633	354	224	154	84	54	40	31	27	24	20	18	16	15	13	11

† Reliability of values in column is uncertain, and potential errors are large.

09489100 BLACK RIVER NEAR MAVERICK, AZ--CONTINUED







09489200 PACHETA CREEK AT MAVERICK, AZ

LOCATION.--Lat 33°44'23", long 109°32'24", at corner of secs.28, 29, 32, 33, T.4 N., R.27 E. (unsurveyed), Apache County, Hydrologic Unit 15060101, in Fort Apache Indian Reservation, on left bank 0.5 mi southeast of Maverick.

DRAINAGE AREA.--14.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	04-22-58	312
1959	10-06-58	140
1960	03-21-60	102
1961	08-08-61	18
1962	04-09-62	179
1963	08-19-63	118
1964	08-14-64	95
1965	04-23-65	128
1966	03-22-66	145
1967	08-27-67	60
1968	04-15-68	120
1969	04-06-69	122
1970	04-11-70	71
1971	09-30-71	39
1972	10-24-71	69
1973	05-13-73	323
1974	08-05-74	39
1975	04-25-75	132
1976	04-10-76	47
1977	08-11-77	45
1978	03-30-78	173
1979	12-18-78	224
1980	04-21-80	158

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
160	14.2	8,810	88.0	3.0	30.3	2.2	5.2

09489200 PACHETA CREEK AT MAVERICK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-80

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	24	0.53	3.3	5.2	1.6	3.0
NOVEMBER	12	0.35	2.5	2.5	1.0	2.2
DECEMBER	27	0.68	3.3	5.7	1.7	3.0
JANUARY	15	0.59	3.3	4.3	1.3	3.0
FEBRUARY	14	0.59	4.2	4.0	0.94	3.8
MARCH	61	1.6	17	17	1.0	15.3
APRIL	102	1.5	44	36	0.82	39.8
MAY	131	0.50	21	30	1.4	19.5
JUNE	19	0.27	3.4	4.6	1.3	3.1
JULY	6.4	0.25	2.0	1.5	0.76	1.8
AUGUST	12	0.37	2.6	2.2	0.87	2.3
SEPTEMBER	15	0.33	3.3	3.7	1.1	3.0
ANNUAL	28	0.96	9.1	7.0	0.76	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-80

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.89	0.50	0.34	0.23	0.14	0.10
3	0.89	0.50	0.34	0.23	0.14	0.10
7	0.92	0.52	0.35	0.24	0.14	0.10
14	0.95	0.55	0.38	0.26	0.16	0.11
30	0.99	0.61	0.43	0.31	0.20	0.14
60	1.1	0.69	0.50	0.37	0.25	0.18
90	1.2	0.77	0.57	0.42	0.28	0.21
120	1.4	0.86	0.63	0.47	0.32	0.24
183	1.6	0.95	0.70	0.54	0.39	0.32

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1958-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
106	180	234	308	366	426

WEIGHTED SKEW (LOGS)= -0.18
MEAN (LOGS)= 2.02
STANDARD DEV. (LOGS)= 0.28

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-80

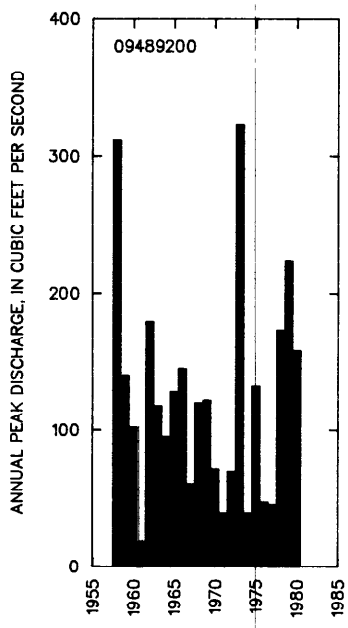
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	73	146	199	265	312	356
3	66	139	191	254	298	339
7	58	127	176	235	275	312
15	48	109	155	213	255	294
30	38	89	131	187	230	273
60	26	63	94	139	175	212
90	20	47	70	103	129	157

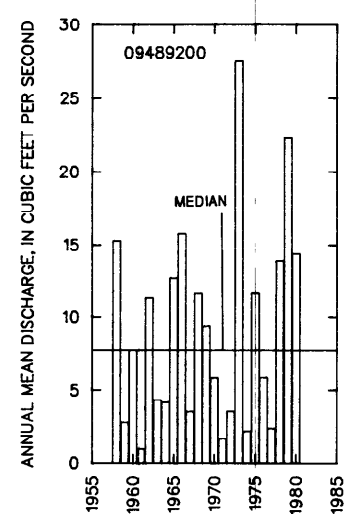
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-80

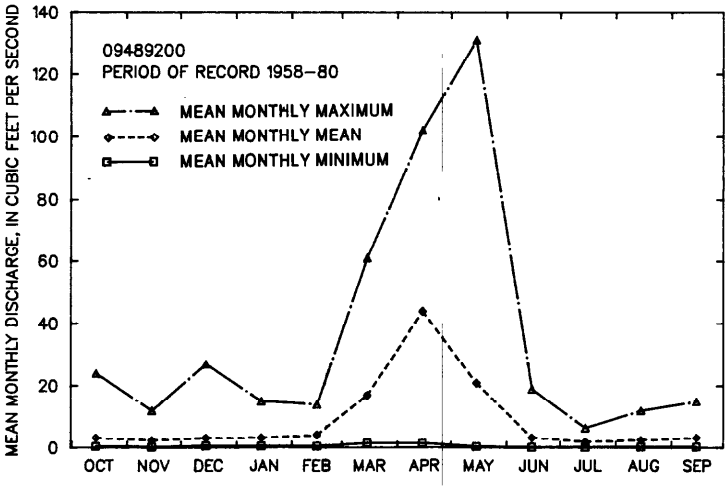
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
116	49	23	14	8.4	3.9	2.4	1.9	1.6	1.4	1.2	0.83	0.56	0.31	0.26	0.23	0.21

† Reliability of values in column is uncertain, and potential errors are large.

09489200 PACHETA CREEK AT MAVERICK, AZ--CONTINUED







09489499 BLACK RIVER ABOVE WILLOW CREEK DIVERSION, NEAR POINT OF PINES, AZ

LOCATION.--Lat 33°28'36", Long 109°45'48", in W½ sec.32, T.2 N., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 15060101, in San Carlos Indian Reservation on left bank 0.9 mi downstream from Phelps Dodge Corporation pumping plant, 1.3 mi downstream from Freezeout Creek, 8 mi northwest of Point of Pines, and 63 mi upstream from confluence with White River.

DRAINAGE AREA.--560 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1954	03-23-54	5,000	1972	10-25-71	3,210
1955	08-21-55	1,310	1973	10-19-72	17,900
1956	03-20-56	642	1974	08-02-74	404
1957	08-26-57	2,060	1975	03-09-75	2,840
1958	04-23-58	4,590	1976	04-10-76	782
1959	08-19-59	4,820	1977	04-10-77	610
1960	03-14-60	1,820	1978	03-01-78	5,980
1961	04-04-61	495	1979	12-19-78	12,400
1962	04-11-62	2,950	1980	02-15-80	6,640
1963	08-29-63	1,720	1981	04-14-81	820
1964	10-20-63	1,110	1982	04-13-82	1,750
1965	04-22-65	2,640	1983	04-26-83	3,020
1966	12-30-65	6,380	1984	10-02-83	17,300
1967	08-13-67	1,330	1985	03-12-85	7,440
1968	04-16-68	2,440	1986	04-03-86	1,460
1969	04-07-69	2,010	1987	04-18-87	2,530
1970	04-12-70	479	1988	09-01-88	2,360
1971	08-21-71	542	1989	08-05-89	1,140

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
51.1	69.2	8,000	86.0	2.9	25.3	2.3	4.4

09489499 BLACK RIVER ABOVE WILLOW CREEK DIVERSION, NEAR POINT OF PINES, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1954-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,220	28	140	247	1.8	5.2
NOVEMBER	380	33	97	84	0.86	3.6
DECEMBER	924	25	130	185	1.4	4.8
JANUARY	518	30	124	122	0.98	4.6
FEBRUARY	1,050	37	226	223	0.99	8.3
MARCH	1,880	71	543	457	0.84	20.0
APRIL	2,270	59	766	664	0.87	28.3
MAY	1,960	38	322	400	1.2	11.9
JUNE	267	25	76	63	0.83	2.8
JULY	135	27	58	24	0.42	2.1
AUGUST	387	34	122	97	0.80	4.5
SEPTEMBER	385	25	105	89	0.85	3.9
ANNUAL	624	60	225	154	0.68	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	28	22	20	18	16	15
3	29	24	22	21	19	19
7	31	26	24	22	21	20
14	33	28	25	24	22	21
30	36	30	27	26	24	24
60	40	33	30	29	27	26
90	45	36	33	31	28	27
120	49	39	35	33	31	30
183	62	47	41	38	35	33

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,190	5,150	8,130	13,300	18,300	24,500

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 3.35
STANDARD DEV. (LOGS)= 0.44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1954-89

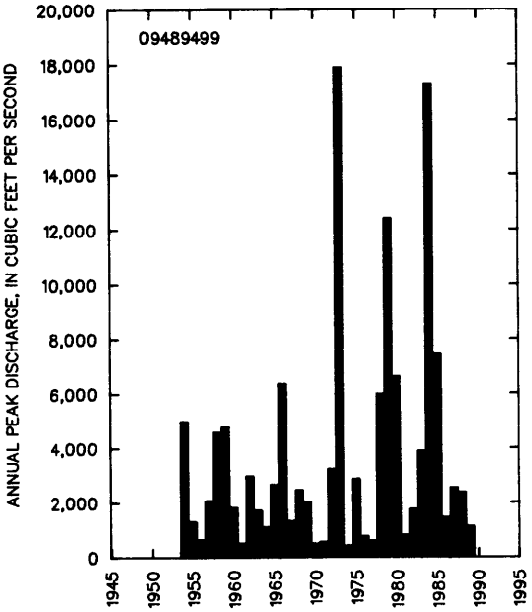
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,590	3,490	5,280	8,210	10,900	14,100
3	1,390	2,850	4,110	6,000	7,630	9,440
7	1,170	2,240	3,090	4,290	5,250	6,260
15	948	1,810	2,490	3,460	4,250	5,090
30	747	1,460	2,050	2,920	3,650	4,450
60	549	1,100	1,570	2,260	2,860	3,510
90	438	891	1,280	1,850	2,350	2,890

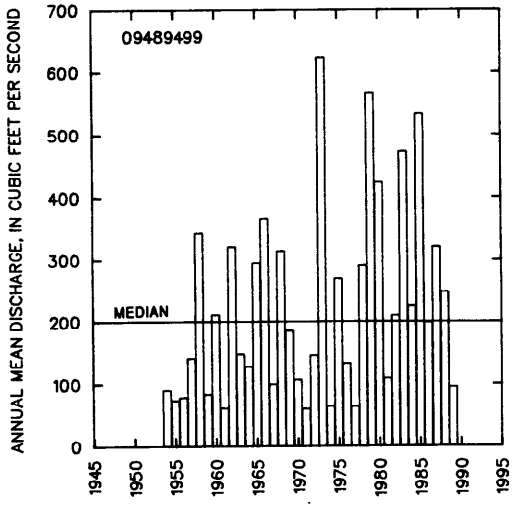
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-89

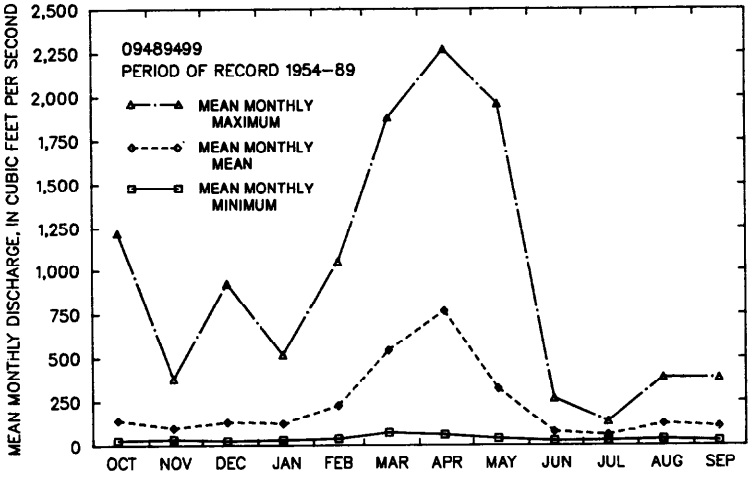
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,180	996	566	359	258	152	100	73	58	49	43	36	31	26	24	23	20

† Reliability of values in column is uncertain, and potential errors are large.

09489499 BLACK RIVER ABOVE WILLOW CREEK DIVERSION, NEAR POINT OF PINES, AZ--CONTINUED







09489700 BIG BONITO CREEK NEAR FORT APACHE, AZ

LOCATION.--Lat 33°40'02", long 109°50'46", in NE¼ sec.28, T.4 N., R.24 E. (unsurveyed), Apache County, Hydrologic Unit 15060101, in Fort Apache Indian Reservation, near right bank on downstream side of pier of highway bridge, 1.9 mi upstream from Tonto Creek, 3.7 mi southeast of Chino Springs, and 12 mi southeast of Fort Apache.

DRAINAGE AREA.--119 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	03-22-58	1,120	1970	09-06-70	560
1959	08-15-59	1,200	1971	09-01-71	312
1960	03-27-60	356	1972	12-26-71	1,090
1961	04-06-61	83	1973	10-20-72	1,870
1962	04-17-62	710	1974	08-02-74	194
1963	08-26-63	557	1975	04-26-75	453
1964	08-14-64	885	1976	02-10-76	194
1965	01-08-65	973	1977	08-19-77	243
1966	12-30-65	1,640	1978	03-03-78	[1]2,870
1967	08-12-67	448	1979	12-18-78	[1]4,510
1968	04-16-68	426	1980	02-15-80	3,440
1969	04-01-69	678	1981	04-01-81	153

[1]Highest since 1952.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
106	33.5	7,920	95.0	3.0	27.9	2.5	4.8

09489700 BIG BONITO CREEK NEAR FORT APACHE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-80

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	157	9.2	30	40	1.3	3.7
NOVEMBER	69	10	28	19	0.71	3.3
DECEMBER	251	11	39	57	1.5	4.8
JANUARY	115	11	40	35	0.86	4.9
FEBRUARY	316	10	65	68	1.0	7.9
MARCH	521	21	133	119	0.90	16.2
APRIL	540	23	224	168	0.75	27.2
MAY	610	11	138	149	1.1	16.8
JUNE	148	6.3	34	39	1.1	4.1
JULY	50	6.5	20	11	0.56	2.4
AUGUST	122	7.8	40	29	0.73	4.9
SEPTEMBER	112	7.0	31	26	0.83	3.8
ANNUAL	167	17	69	43	0.62	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-81

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	6.2	4.8	4.2	3.8	3.4	3.1
3	6.7	5.3	4.6	4.1	3.7	3.4
7	7.2	5.6	4.9	4.3	3.8	3.5
14	7.8	6.3	5.6	5.0	4.5	4.1
30	9.0	7.3	6.4	5.8	5.1	4.7
60	11	9.0	8.0	7.1	6.3	5.7
90	13	10	9.3	8.6	7.8	7.3
120	14	11	10	9.7	9.3	9.0
183	19	14	12	11	9.4	8.7

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1958-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
629	1,440	2,200	3,470	4,650	6,040

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 2.80
STANDARD DEV. (LOGS)= 0.43

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-80

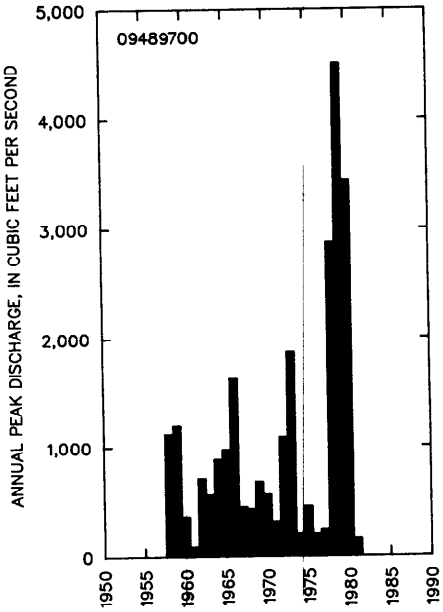
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	453	969	1,440	2,190	2,860	3,640
3	391	791	1,140	1,670	2,130	2,650
7	328	623	859	1,190	1,470	1,760
15	269	503	684	937	1,140	1,350
30	219	416	576	806	997	1,200
60	172	330	456	638	786	945
90	140	271	375	520	638	761

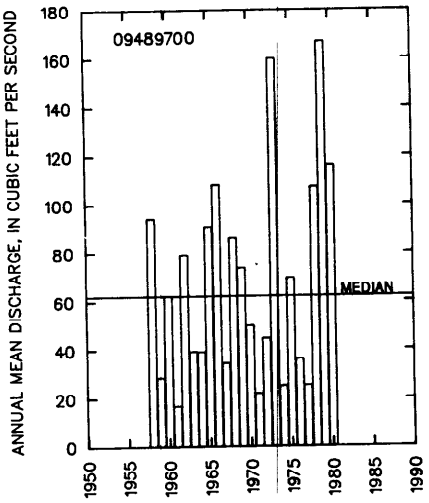
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-80

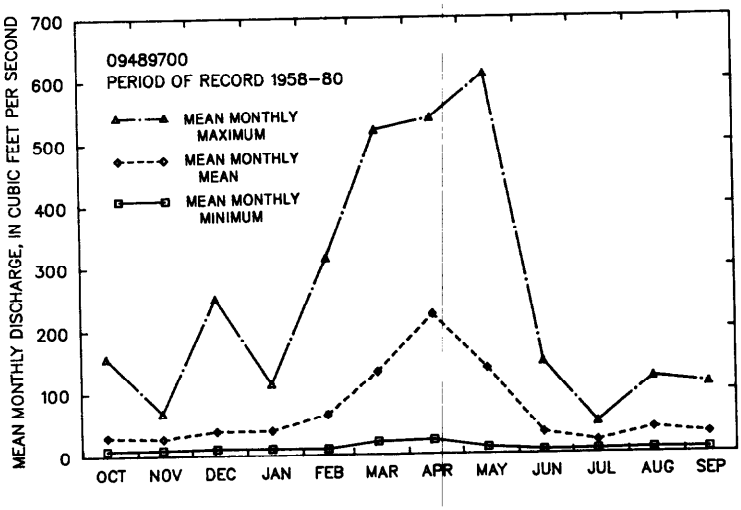
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
597	293	177	122	87	53	34	24	18	15	12	9.9	8.1	6.4	5.6	5.1	4.4

† Reliability of values in column is uncertain, and potential errors are large.

09489700 BIG BONITO CREEK NEAR FORT APACHE, AZ--CONTINUED







09490500 BLACK RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°42'46", long 110°12'40", in NW¼ sec.12, T.4 N., R.20 E. (unsurveyed), Gila County, Hydrologic Unit 15060101, on downstream side of first pier from right on highway bridge, 5 mi upstream from confluence with White River and 14 mi west of Fort Apache.

DRAINAGE AREA.--1,232 mi^2.

REMARKS.--One transbasin diversion for industrial and municipal use (see record of Willow Creek diversion from Black River, near Morenci). Negligible storage in several small recreational lakes.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1915	12-20-14	18,000		1972	12-26-71	10,500	
1916	01-19-16	[1]50,000	ES,HP	1973	10-20-72	28,400	
1937	02-07-37	[2]35,000	ES,HP	1974	03-22-74	574	
1941	03-14-41	[3]35,000	ES,HP	1975	03-09-75	4,360	
1952	01-14-52	[4]35,000	ES,HP	1976	02-11-76	1,560	
1958	03-22-58	12,900		1977	08-18-77	1,030	
1959	08-18-59	8,300		1978	03-02-78	[5]33,200	
1960	12-26-59	12,900		1979	12-18-78	[6]40,200	
1961	09-14-61	914		1980	02-15-80	40,000	
1962	01-25-62	4,920		1981	04-14-81	1,260	
1963	02-10-63	5,580		1982	02-11-82	10,800	
1964	08-15-64	2,280		1983	01-30-83	12,000	
1965	01-08-65	8,180		1984	10-02-83	44,200	
1966	12-30-65	24,800		1985	12-28-84	21,400	
1967	08-11-67	2,870		1986	02-16-86	12,600	
1968	01-28-68	7,010		1987	12-07-86	7,140	
1969	01-22-69	3,860		1988	09-01-88	8,790	
1970	04-13-70	675		1989	03-12-89	948	
1971	08-19-71	1,780					

[1]Highest since 1906.
[2]Highest since 1916.
[3]Highest since 1937.
[4]Highest since 1941.
[5]Highest since 1952.
[6]Highest since 1916.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
36.2	120	7,200	81.0	3.0	23.4	2.2	4.2

09490500 BLACK RIVER NEAR FORT APACHE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1915, 1958-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	2,730	31	260	554	2.1	5.1
NOVEMBER	565	37	155	144	0.93	3.0
DECEMBER	2,450	38	413	643	1.6	8.0
JANUARY	1,070	37	338	331	0.98	6.6
FEBRUARY	3,150	57	592	635	1.1	11.5
MARCH	3,860	90	1,040	926	0.89	20.2
APRIL	4,420	75	1,250	1,060	0.85	24.3
MAY	3,110	39	546	651	1.2	10.6
JUNE	448	17	114	118	1.0	2.2
JULY	763	30	91	125	1.4	1.8
AUGUST	659	35	195	176	0.90	3.8
SEPTEMBER	650	31	149	145	0.97	2.9
ANNUAL	1,200	78	428	310	0.72	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1915, 1959-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	25	17	15	13	11	9.9
3	26	19	16	14	12	12
7	28	20	17	15	13	12
14	31	22	19	17	15	14
30	35	26	22	19	17	16
60	43	32	29	26	24	23
90	53	39	34	31	28	26
120	63	45	39	35	31	29
183	83	57	50	46	42	41

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
6,360	18,100	30,500	52,100	72,900	97,900

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 3.78
STANDARD DEV. (LOGS)= 0.56

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1915, 1958-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	3,880	10,700	18,100	31,400	44,800	61,500
3	2,970	7,440	11,900	19,700	27,100	36,200
7	2,190	4,820	7,170	10,800	14,000	17,600
15	1,720	3,490	4,930	7,000	8,690	10,500
30	1,330	2,610	3,620	5,020	6,140	7,310
60	1,010	2,030	2,850	3,980	4,890	5,840
90	840	1,730	2,430	3,390	4,160	4,950

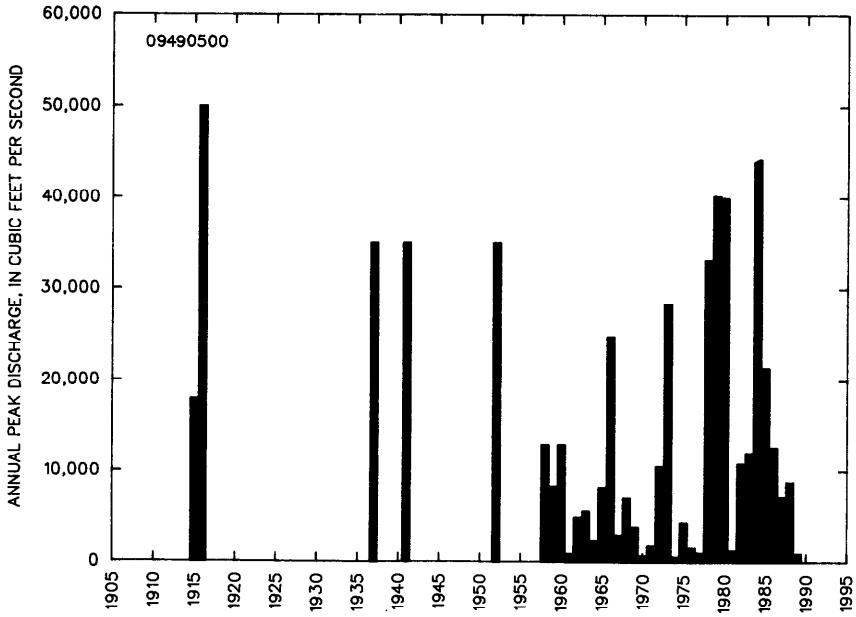
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1915, 1958-89

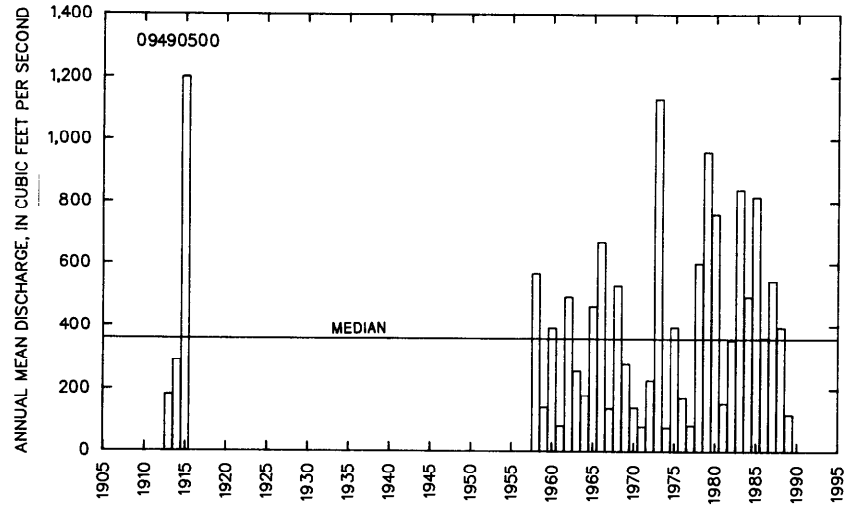
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

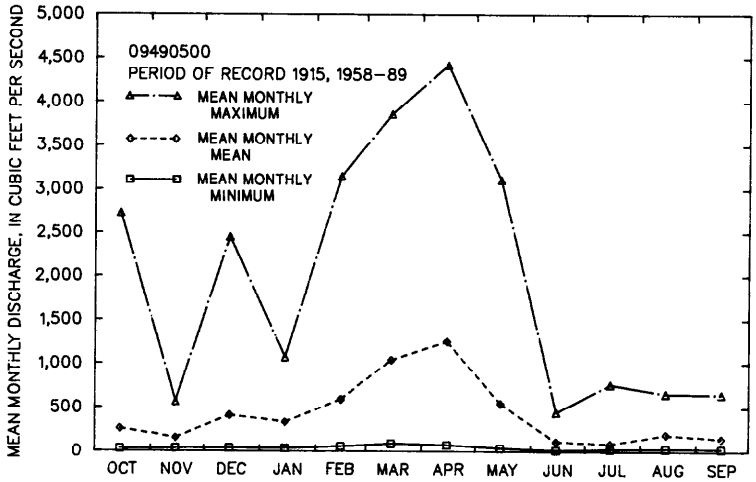
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,050	1,870	1,180	767	508	273	166	113	84	66	52	39	31	24	21	18	13

† Reliability of values in column is uncertain, and potential errors are large.

09490500 BLACK RIVER NEAR FORT APACHE, AZ--CONTINUED







GILA RIVER BASIN

09490800 NORTH FORK WHITE RIVER NEAR GREER, AZ

LOCATION.--Lat 34°00'55", long 109°38'37", in SW¼ sec.7, T.7 N., R.26 E. (unsurveyed), Apache County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on right bank 300 ft upstream from Bear and Cienega Creek and 11 mi west of Greer.

DRAINAGE AREA.--40.2 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	04-02-66	299
1967	03-09-67	194
1968	04-15-68	183
1969	04-06-69	177
1970	04-10-70	242
1971	09-30-71	150
1972	10-01-71	162
1973	04-28-73	510
1974	03-30-74	81
1975	05-15-75	157
1976	04-09-76	139
1977	04-09-77	205
1978	03-30-78	153

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
216	10.1	9,520	74.0	3.0	34.2	2.9	5.5

09490800 NORTH FORK WHITE RIVER NEAR GREER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	54	8.7	20	15	0.76	6.7
NOVEMBER	27	6.6	13	7.4	0.55	4.5
DECEMBER	25	6.1	11	5.3	0.49	3.7
JANUARY	19	6.0	9.6	3.3	0.35	3.3
FEBRUARY	21	6.0	10	3.7	0.35	3.5
MARCH	54	9.8	21	13	0.62	7.0
APRIL	97	17	52	28	0.53	17.6
MAY	233	14	63	57	0.90	21.4
JUNE	152	7.9	39	39	0.98	13.3
JULY	44	8.4	17	9.5	0.55	5.9
AUGUST	47	9.9	20	9.9	0.49	6.9
SEPTEMBER	43	9.0	18	10	0.57	6.2
ANNUAL	57	13	25	12	0.47	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	6.4	5.3	4.8	4.3	3.9	3.6
3	6.5	5.5	5.0	4.6	4.2	4.0
7	6.7	5.8	5.3	4.9	4.5	4.3
14	6.8	6.1	5.7	5.4	5.1	4.9
30	7.6	6.9	6.5	6.1	5.8	5.5
60	8.1	7.3	6.8	6.4	5.9	5.5
90	8.6	7.6	7.0	6.5	5.9	5.5
120	8.9	8.0	7.6	7.4	7.0	6.8
183	11	9.5	9.1	8.8	8.5	8.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
183	266	325	405	469	535

WEIGHTED SKEW (LOGS)= 0.17
MEAN (LOGS)= 2.27
STANDARD DEV. (LOGS)= 0.19

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1966-78

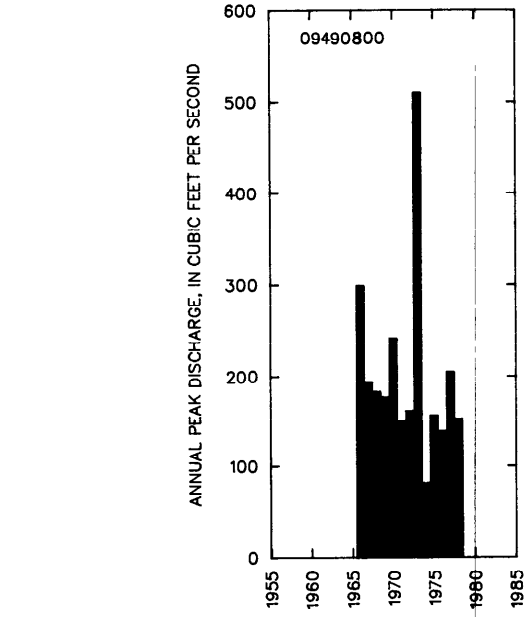
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	113	172	221	295	360	434
3	98	155	202	274	338	412
7	84	137	181	249	308	377
15	73	121	159	216	265	321
30	64	107	141	192	235	283
60	55	93	126	175	218	268
90	47	79	104	142	175	211

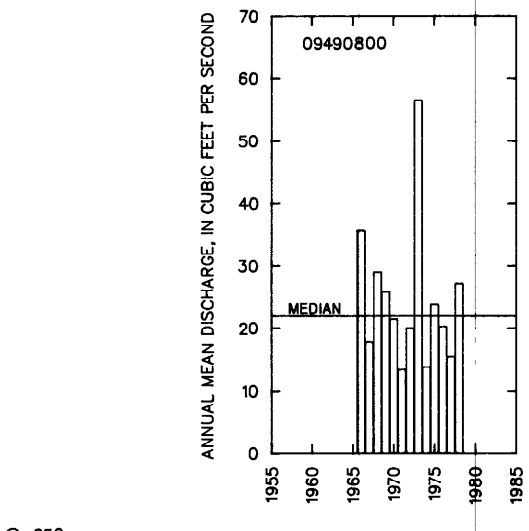
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-78

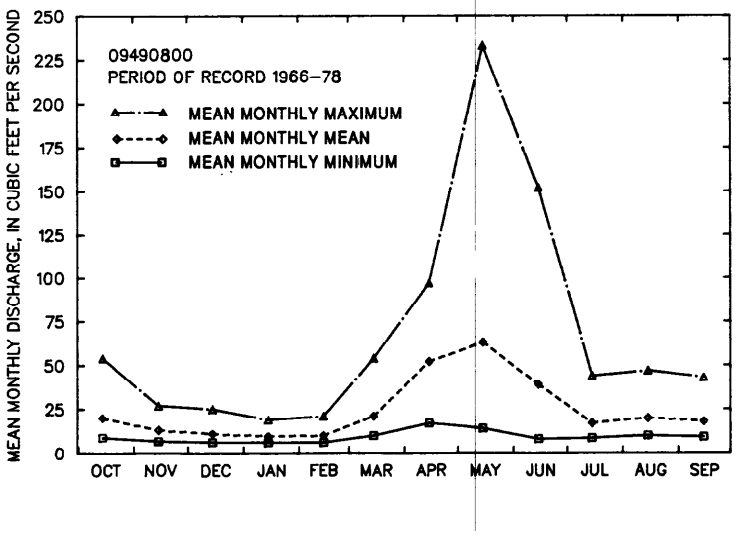
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
193	79	59	42	32	22	17	14	12	10	8.9	7.9	7.2	6.4	6.0	5.3	4.7

† Reliability of values in column is uncertain, and potential errors are large.

09490800 NORTH FORK WHITE RIVER NEAR GREER, AZ--CONTINUED







GILA RIVER BASIN

09491000 NORTH FORK WHITE RIVER NEAR McNARY, AZ

LOCATION.--Lat 34°02'47", long 109°44'02", in E½ sec.31, T.8 N., R.25 E. (unsurveyed), Apache County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on left bank 1.9 mi downstream from Paradise Creek and 7 mi southeast of McNary.

DRAINAGE AREA.--78.2 mi^2.

REMARKS.--No storage above station. Water diverted about 5 mi upstream from station for use at McNary.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1946	09-19-46	1,290		1967	08-11-67	271	
1948	04-16-48	1,120		1968	04-15-68	351	
1949	04-15-49	656		1969	04-06-69	393	
1950	03-00-50	188		1970	04-10-70	310	
1951	08-28-51	167		1971	09-30-71	257	
1952	04-06-52	748		1972	10-24-71	352	
1953	03-29-53	152		1973	04-28-73	1,000	ES
1954	03-23-54	304		1974	03-30-74	140	
1955	00-00-55	145		1975	05-15-75	350	
1956	00-00-56	170		1976	05-21-76	184	
1957	08-24-57	729		1977	04-09-77	316	
1958	04-22-58	1,230		1978	03-31-78	455	
1959	10-05-58	148		1979	12-18-78	1,060	
1960	03-26-60	390		1980	06-09-80	273	
1961	04-05-61	248		1981	04-13-81	397	
1962	04-16-62	680		1982	04-12-82	505	
1963	09-10-63	385		1983	06-01-83	552	
1964	04-12-64	444		1984	10-02-83	2,310	
1965	04-23-65	791		1985	03-12-85	754	
1966	04-03-66	512					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
153	18.5	9,320	79.7	3.0	32.2	2.9	5.5

09491000 NORTH FORK WHITE RIVER NEAR MCNARY, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1946, 1951-54, 1958-85

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	213	9.4	31	39	1.3	5.2
NOVEMBER	49	8.4	21	10	0.48	3.6
DECEMBER	98	7.5	21	17	0.81	3.7
JANUARY	78	6.4	20	15	0.72	3.5
FEBRUARY	41	8.7	19	7.7	0.40	3.3
MARCH	170	14	45	33	0.74	7.7
APRIL	282	28	127	79	0.62	21.7
MAY	454	17	134	104	0.78	23.0
JUNE	293	10	72	72	0.99	12.4
JULY	80	10	27	17	0.62	4.7
AUGUST	82	14	33	15	0.47	5.6
SEPTEMBER	123	9.5	33	25	0.74	5.7
ANNUAL	108	16	49	25	0.51	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1947, 1952-54, 1959-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	9.8	7.8	7.1	6.6	6.2	6.0
3	10	8.0	7.2	6.8	6.3	6.1
7	10	8.2	7.4	6.8	6.3	6.1
14	11	8.7	7.8	7.2	6.6	6.3
30	12	9.6	8.7	8.1	7.5	7.2
60	13	11	9.7	9.0	8.4	8.0
90	14	12	11	9.9	9.2	8.8
120	16	12	11	10	9.7	9.3
183	18	14	13	12	11	11

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1946, 1948-85

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
407	742	1,030	1,460	1,850	2,280

WEIGHTED SKEW (LOGS)= 0.16
MEAN (LOGS)= 2.62
STANDARD DEV. (LOGS)= 0.30

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1946, 1951-54, 1958-85

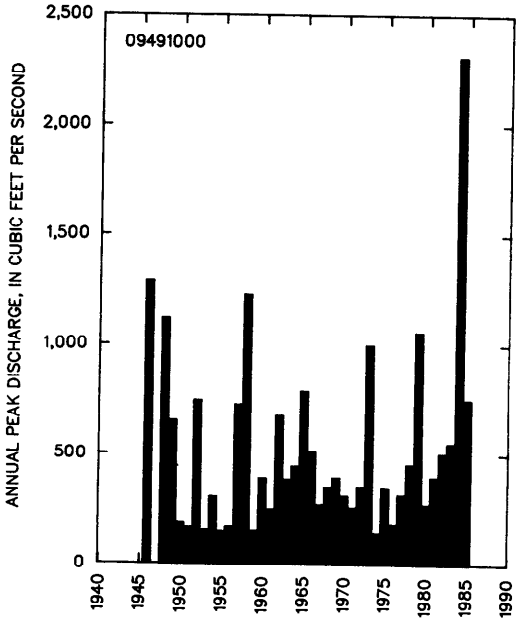
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	294	542	766	1,130	1,460	1,860
3	254	458	624	868	1,070	1,300
7	216	377	495	652	774	899
15	178	309	402	524	616	708
30	147	258	340	449	534	621
60	121	214	286	384	461	543
90	99	175	233	314	378	447

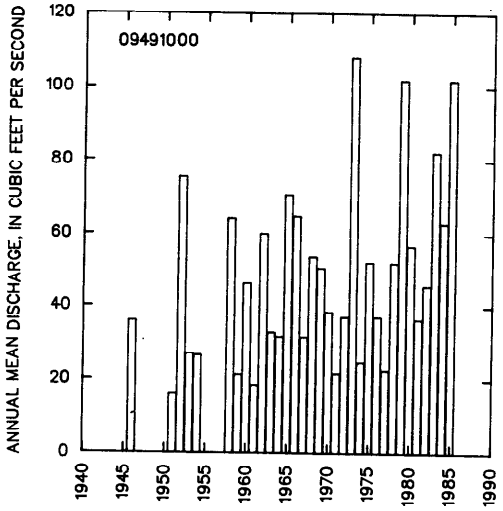
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946, 1951-54, 1958-85

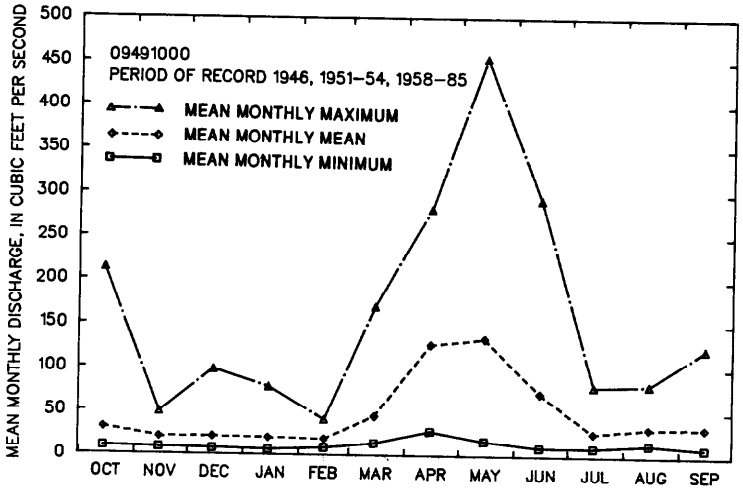
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
388	189	121	77	58	40	30	23	20	17	15	12	10	8.4	7.6	6.7	5.9

† Reliability of values in column is uncertain, and potential errors are large.

09491000 NORTH FORK WHITE RIVER NEAR MCNARY, AZ--CONTINUED







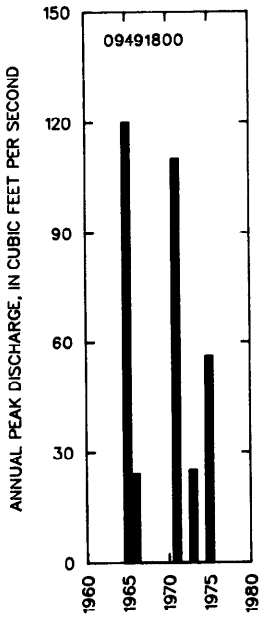
09491800 NORTH FORK WHITE RIVER TRIBUTARY NEAR WHITERIVER, AZ

LOCATION.--Lat 33°55'44", long 109°56'19", in SE¼ sec.8, T.6 N., R.23 E. (unsurveyed), Navajo County, Hydrologic Unit 15060102, at State Highway 73, 6.5 mi north of Whiteriver.

DRAINAGE AREA.--2.27 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	00-00-65	120	LT
1966	12-22-65	24	
1967	00-00-67	0	
1968	11-00-67	0.1	LT
1969	00-00-69	0	
1970	00-00-70	0	
1971	08-00-71	110	
1972	00-00-72	0	
1973	10-19-72	25	
1974	00-00-74	0	
1975	07-00-75	56	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
272	3.6	6,290	99.0	3.0	20.5	2.1	4.2

GILA RIVER BASIN

09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°49'20", long 109°48'50", in SE¼ sec.16, T.5 N., R.24 E. (unsurveyed), Apache County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on left bank 600 ft downstream from highway bridge, 0.1 mi upstream from Rock Creek and 10 mi east of Fort Apache.

DRAINAGE AREA.--38.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1958	04-22-58	411		1974	05-15-74	89	
1959	10-06-58	330		1975	05-16-75	270	
1960	05-13-60	207		1976	07-30-76	166	
1961	08-17-61	663		1977	08-16-77	122	
1962	05-12-62	300	ES	1978	03-01-78	318	
1963	08-30-63	116		1979	12-18-78	751	
1964	08-09-64	83		1980	05-22-80	372	
1965	05-02-65	204		1981	05-03-81	167	
1966	11-25-65	270		1982	05-02-82	283	
1967	08-03-67	758		1983	06-01-83	388	
1968	08-05-68	352		1984	10-01-83	2,700	
1969	05-21-69	194		1985	03-12-85	481	
1970	09-06-70	396		1986	07-16-86	154	
1971	09-01-71	205		1987	04-17-87	235	
1972	10-01-71	266		1988	04-28-88	211	
1973	10-20-72	732		1989	03-14-89	122	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
239	17.9	8,580	96.0	3.0	31.2	2.8	5.6

09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	128	8.7	25	27	1.1	5.7
NOVEMBER	44	8.2	17	9.2	0.53	3.9
DECEMBER	57	7.8	17	11	0.66	3.8
JANUARY	34	7.7	16	7.7	0.49	3.5
FEBRUARY	66	7.8	21	12	0.57	4.7
MARCH	103	9.9	39	23	0.60	8.8
APRIL	182	19	82	43	0.52	18.6
MAY	284	13	103	68	0.66	23.3
JUNE	172	6.2	49	49	1.0	11.2
JULY	46	7.7	20	11	0.55	4.5
AUGUST	71	11	28	15	0.53	6.5
SEPTEMBER	66	6.9	24	14	0.57	5.4
ANNUAL	72	15	37	16	0.43	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	6.7	5.4	4.9	4.6	4.4	4.3
3	7.1	5.9	5.4	5.2	5.0	4.9
7	7.7	6.3	5.8	5.5	5.2	5.0
14	8.2	6.8	6.4	6.1	5.8	5.6
30	9.0	7.5	7.0	6.7	6.4	6.3
60	9.7	8.2	7.7	7.4	7.2	7.1
90	11	9.0	8.3	7.9	7.5	7.3
120	12	9.9	9.0	8.4	7.8	7.4
183	15	12	10	9.7	9.0	8.6

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
264	487	688	1,020	1,330	1,700

WEIGHTED SKEW (LOGS)= 0.40
MEAN (LOGS)= 2.44
STANDARD DEV. (LOGS)= 0.30

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1958-89

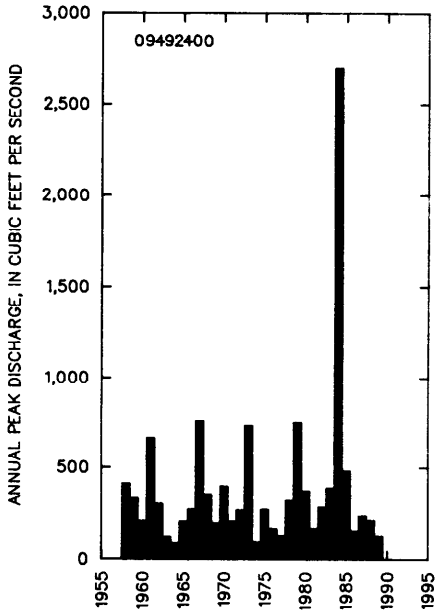
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	187	342	481	707	917	1,170
3	167	279	368	496	604	723
7	148	234	294	374	435	498
15	129	198	244	303	346	389
30	111	170	211	264	303	343
60	92	146	184	235	274	314
90	75	121	153	195	226	259

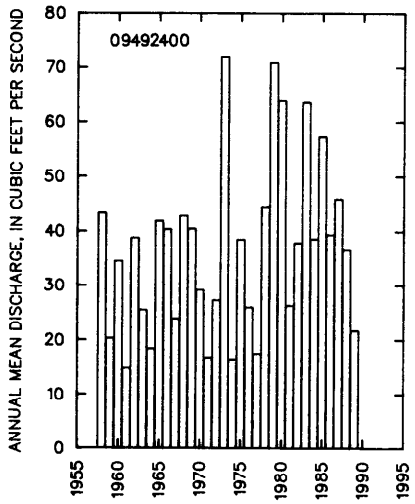
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-89

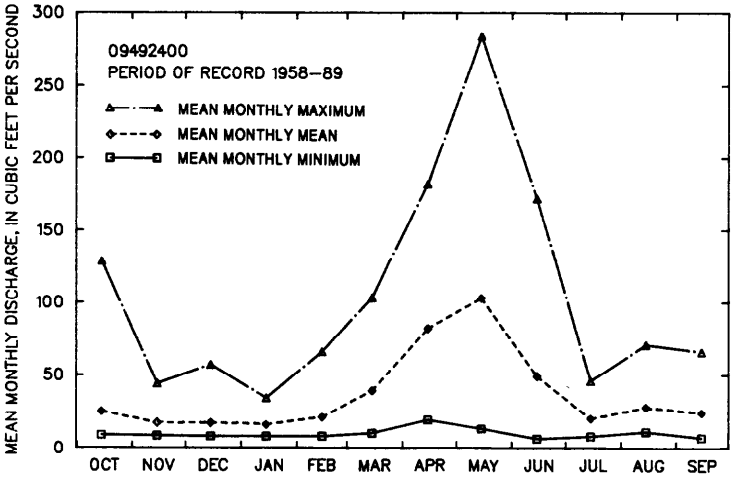
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
237	131	91	63	49	33	25	20	16	13	11	9.0	8.0	7.0	6.5	5.9	5.0

† Reliability of values in column is uncertain, and potential errors are large.

09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ--CONTINUED







09494000 WHITE RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°44'11", long 110°09'58", in SE¼ sec.32, T.4 N., R.21 E. (unsurveyed) Gila County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on right bank 2,200 ft downstream from highway bridge, 4.5 mi upstream from confluence with Black River, and 11 mi west of Fort Apache.

DRAINAGE AREA.--632 mi^2.

REMARKS.--Small diversions above station for irrigation of about 1,460 acres. Negligible storage above station in several small recreational lakes.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	03-22-58	2,700
1959	07-28-59	4,900
1960	12-26-59	2,580
1961	08-29-61	3,590
1962	04-16-62	2,090
1963	08-26-63	1,970
1964	07-25-64	4,480
1965	07-28-65	2,870
1966	12-30-65	4,360
1967	07-22-67	8,180
1968	04-16-68	1,390
1969	04-07-69	1,190
1970	08-13-70	1,850
1971	08-12-71	8,670
1972	12-26-71	5,170
1973	04-29-73	4,680
1974	08-01-74	3,110
1975	04-27-75	1,930
1976	07-14-76	2,220
1977	07-24-77	1,980
1978	03-01-78	6,590
1979	12-18-78	14,600
1980	02-15-80	8,160
1981	08-31-81	1,240
1982	03-13-82	2,130
1983	04-26-83	1,870
1984	10-02-83	9,410
1985	03-12-85	8,900
1986	08-27-86	3,780
1987	04-18-87	2,000
1988	08-31-88	1,590
1989	03-14-89	688

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
76.8	62.5	7,400	83.0	3.0	25.4	2.3	4.6

09494000 WHITE RIVER NEAR FORT APACHE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	774	31	123	163	1.3	4.9
NOVEMBER	218	35	90	57	0.63	3.6
DECEMBER	715	35	128	154	1.2	5.1
JANUARY	333	32	113	84	0.75	4.5
FEBRUARY	787	33	166	146	0.88	6.6
MARCH	1,160	49	354	276	0.78	14.0
APRIL	1,450	77	610	403	0.66	24.2
MAY	2,070	31	467	430	0.92	18.5
JUNE	602	10	164	170	1.0	6.5
JULY	187	3.9	76	47	0.62	3.0
AUGUST	388	27	125	76	0.61	5.0
SEPTEMBER	293	19	105	73	0.69	4.2
ANNUAL	486	54	210	120	0.57	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	29	11	5.7	2.9	1.2	0.58
14	32	14	7.8	4.5	2.2	1.3
30	35	18	12	7.8	4.7	3.3
60	42	25	19	15	11	8.9
90	47	33	28	25	22	21
120	54	39	34	31	28	27
183	69	49	42	38	35	33

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,140	5,800	8,020	11,400	14,300	17,600

WEIGHTED SKEW (LOGS)= 0.69
MEAN (LOGS)= 3.50
STANDARD DEV. (LOGS)= 0.31

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1958-89

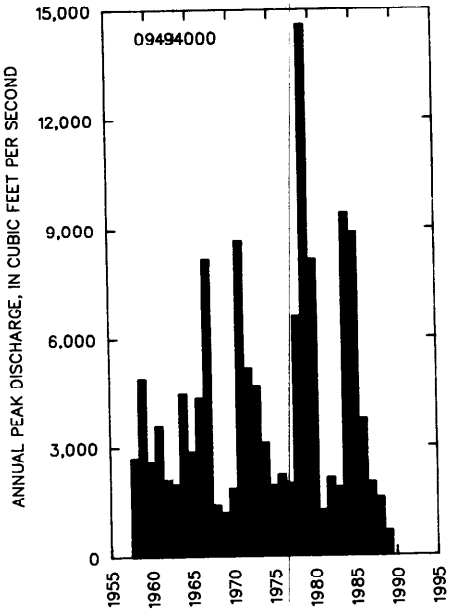
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,380	2,770	4,080	6,280	8,370	10,900
3	1,160	2,200	3,100	4,500	5,740	7,160
7	960	1,700	2,260	3,040	3,660	4,320
15	795	1,370	1,790	2,360	2,800	3,250
30	651	1,130	1,490	1,990	2,380	2,780
60	513	903	1,190	1,590	1,900	2,220
90	426	757	998	1,320	1,560	1,810

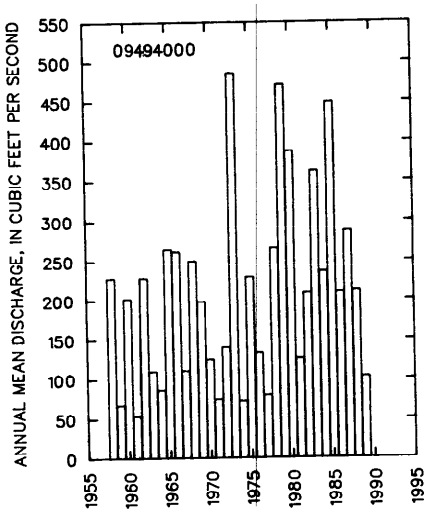
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-89

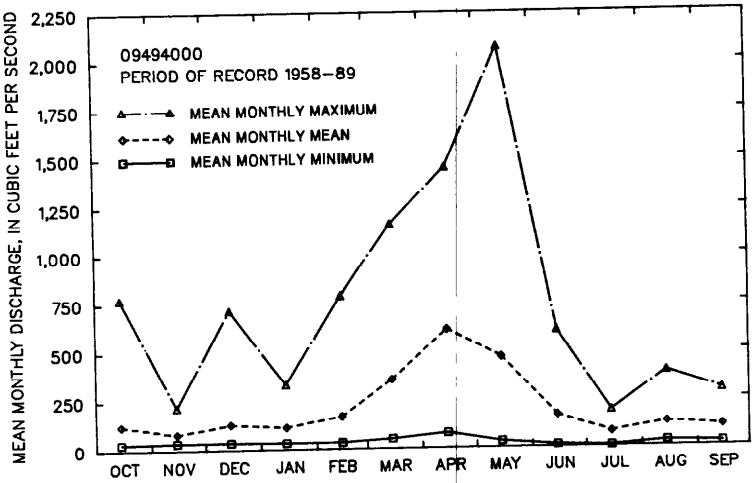
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,580	808	539	391	289	182	127	95	72	56	46	34	26	15	10	7.7	2.0

† Reliability of values in column is uncertain, and potential errors are large.

09494000 WHITE RIVER NEAR FORT APACHE, AZ--CONTINUED







GILA RIVER BASIN

09494300 CARRIZO CREEK ABOVE CORDUROY CREEK, NEAR SHOW LOW, AZ

LOCATION.--Lat 34°00'00", long 110°17'20", in sec.13, T.7 N., R.19 E. Navajo County, Hydrologic Unit 15060104, (unsurveyed), in Fort Apache Indian Reservation, on left bank 0.5 mi upstream from Corduroy Creek and 23 mi southwest of Show Low.

DRAINAGE AREA.--225 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1954	07-09-54	2,760
1955	08-18-55	1,850
1956	08-14-56	2,470
1957	08-31-57	935
1958	09-04-58	2,870
1959	08-19-59	1,240
1960	01-11-60	3,260
1961	09-06-61	694
1962	02-13-62	340
1963	08-26-63	3,040
1964	07-21-64	1,860
1965	01-07-65	2,360
1966	12-30-65	10,000
1967	12-08-66	158

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
64.9	35.0	6,370	97.0	3.0	22.5	2.3	4.8

09494300 CARRIZO CREEK ABOVE CORDUROY CREEK, NEAR SHOW LOW, AZ--Continued

MONTHLY AND ANNUAL MEAN DISCHARGES 1954-66

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	6.8	0.12	2.8	2.2	0.77	2.0
NOVEMBER	54	0.87	7.8	14	1.8	5.5
DECEMBER	301	2.0	35	85	2.4	24.6
JANUARY	135	3.5	25	39	1.6	17.5
FEBRUARY	46	3.5	15	14	0.94	10.3
MARCH	94	3.8	29	30	1.0	20.1
APRIL	44	3.2	12	12	1.0	8.2
MAY	8.8	1.3	4.1	2.7	0.65	2.9
JUNE	3.5	0.01	1.2	1.3	1.1	0.8
JULY	9.7	0.00	2.0	2.9	1.4	1.4
AUGUST	31	0.00	6.4	8.3	1.3	4.5
SEPTEMBER	10	0.00	3.1	3.4	1.1	2.2
ANNUAL	40	3.1	12	13	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-67

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.01	0.00	0.00	0.00	0.00	0.00
60	0.38	0.00	0.00	0.00	0.00	0.00
90	0.82	0.34	0.16	0.00	0.00	0.00
120	1.6	0.72	0.40	0.23	0.11	0.06
183	3.1	1.8	1.1	0.71	0.37	0.22

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1954-67

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,870	3,580	5,020	7,220	9,140	11,300

WEIGHTED SKEW (LOGS)= 0.01
MEAN (LOGS)= 3.27
STANDARD DEV. (LOGS)= 0.33

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1954-66

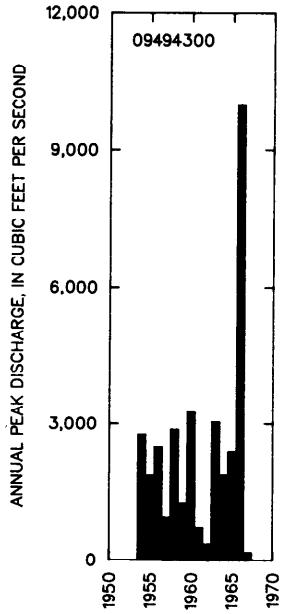
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	269	918	1,800	3,760	6,140	9,620
3	144	511	1,020	2,160	3,540	5,570
7	83	267	503	1,010	1,590	2,430
15	51	153	279	538	834	1,250
30	33	97	179	359	574	889
60	21	61	109	213	334	507
90	16	46	85	169	271	421

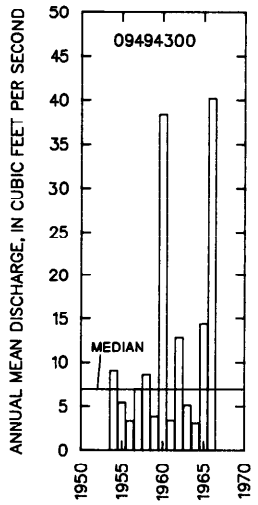
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-66

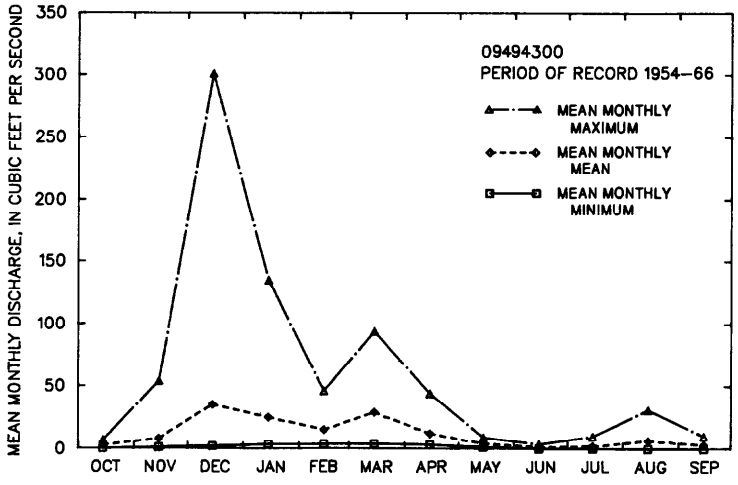
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
144	37	17	9.7	7.0	5.4	4.4	3.7	2.8	1.7	0.63	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09494300 CARRIZO CREEK ABOVE CORDUROY CREEK, NEAR SHOW LOW, AZ--CONTINUED







09496000 CORDUROY CREEK NEAR MOUTH, NEAR SHOW LOW, AZ

LOCATION.--Lat 34°01'06", long 110°14'30", in sec.8, T.7 N., R.20 E. (unsurveyed), Navajo County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on right bank 4 mi upstream from mouth and 20 mi southwest of Show Low.

DRAINAGE AREA.--203 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1952	01-18-52	10,900	1964	07-30-64	402
1953	07-29-53	1,200	1965	01-07-65	4,510
1954	03-23-54	2,450	1966	12-30-65	10,900
1955	08-07-55	257	1967	07-29-67	505
1956	08-17-56	149	1968	01-28-68	902
1957	08-02-57	1,420	1969	01-27-69	504
1958	03-22-58	1,140	1970	08-09-70	38
1959	08-19-59	316	1971	08-13-71	366
1960	12-25-59	3,500	1972	12-26-71	8,500
1961	08-22-61	512	1973	10-20-72	7,600
1962	02-13-62	841	1974	03-21-74	50
1963	09-09-63	7,150	1975	04-12-75	348

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
71.2	31.5	6,370	93.0	3.0	21.7	2.1	4.5

09496000 CORDUROY CREEK NEAR MOUTH, NEAR SHOW LOW, AZ--Continued

MONTHLY AND ANNUAL MEAN DISCHARGES 1952-75

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	161	1.6	13	36	2.8	4.6
NOVEMBER	94	1.8	11	24	2.2	4.0
DECEMBER	347	1.2	35	80	2.3	12.7
JANUARY	434	1.8	45	94	2.1	16.3
FEBRUARY	260	2.0	40	72	1.8	14.7
MARCH	429	2.0	65	91	1.4	23.9
APRIL	191	1.8	27	43	1.6	9.8
MAY	72	1.3	12	16	1.4	4.3
JUNE	28	1.3	7.8	9.2	1.2	2.8
JULY	31	1.4	7.8	8.8	1.1	2.8
AUGUST	24	1.6	7.5	6.4	0.85	2.7
SEPTEMBER	18	1.5	3.6	3.5	0.98	1.3
ANNUAL	115	2.3	23	27	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-75

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	1.3	1.0	0.90	0.80	0.70	0.63
3	1.3	1.0	0.91	0.81	0.69	0.62
7	1.3	1.1	0.95	0.85	0.74	0.67
14	1.4	1.2	1.0	0.94	0.84	0.77
30	1.6	1.3	1.2	1.1	0.98	0.90
60	1.7	1.5	1.4	1.3	1.2	1.1
90	1.9	1.7	1.6	1.5	1.5	1.4
120	2.1	1.8	1.7	1.7	1.6	1.5
183	2.4	2.0	1.9	1.8	1.8	1.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1952-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,070	3,650	6,980	14,000	22,000	33,200

WEIGHTED SKEW (LOGS)= 0.05
MEAN (LOGS)= 3.03
STANDARD DEV. (LOGS)= 0.63

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-75

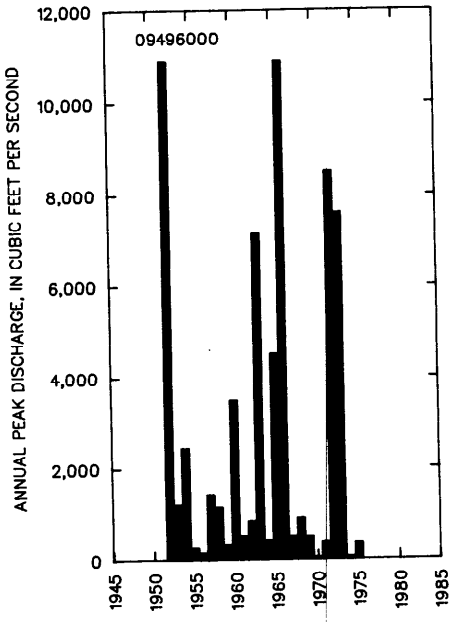
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	287	1,290	2,830	6,510	11,200	18,100
3	179	745	1,540	3,280	5,310	8,130
7	110	441	893	1,860	2,950	4,460
15	71	270	532	1,080	1,700	2,540
30	49	186	368	756	1,200	1,800
60	34	123	240	482	754	1,120
90	27	98	191	388	612	919

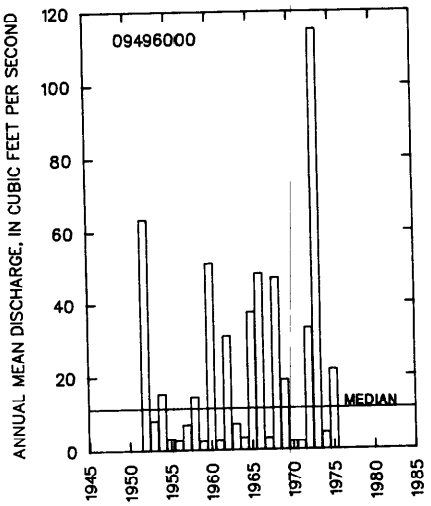
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-75

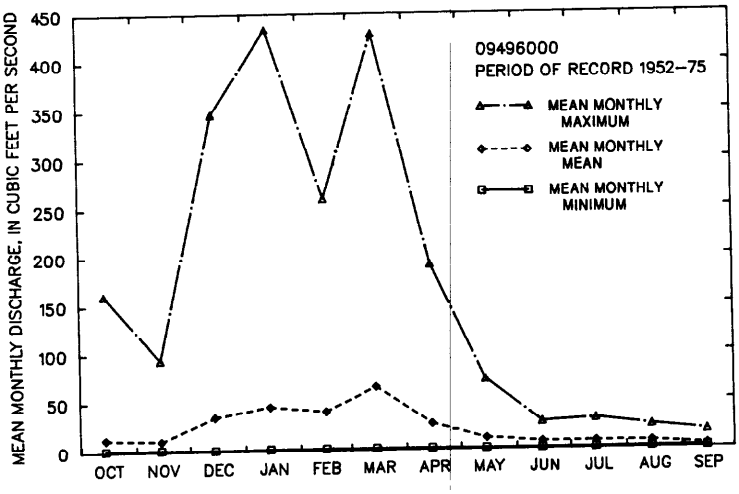
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
364	80	35	26	20	7.6	3.2	2.6	2.3	2.1	1.8	1.6	1.4	1.2	1.1	0.98	0.78

† Reliability of values in column is uncertain, and potential errors are large.

09496000 CORDUROY CREEK NEAR MOUTH, NEAR SHOW LOW, AZ--CONTINUED







09496500 CARRIZO CREEK NEAR SHOW LOW, AZ

LOCATION.--Lat 33°59'09", long 110°16'52", in sec.24, T.7 N., R.19 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on right bank 500 ft upstream from bridge on U.S. Highway 60, 1 mi downstream from Corduroy Creek, 23 mi southwest of Show Low, and 24 mi upstream from mouth. Prior to June 1976 at site on bridge pier 400 ft downstream.

DRAINAGE AREA.--439 mi^2.

REMARKS.--Diversions for irrigation above station of less than 300 acres. Records include transbasin diversion from Show Low Creek. (See station 09495000.)

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1951	08-28-51	3,260		1971	09-29-71	2,000	
1952	01-18-52	20,500		1972	12-26-71	11,200	
1953	07-29-53	3,200		1973	10-19-72	12,400	
1954	03-23-54	3,910		1974	08-03-74	160	
1955	08-18-55	2,060		1975	10-29-74	726	
1956	08-14-56	2,400		1976	02-09-76	4,220	
1957	08-02-57	1,360		1977	08-11-77	5,060	
1958	09-04-58	2,920		1978	03-01-78	12,700	
1959	08-19-59	1,560		1979	12-18-78	19,400	
1960	01-11-60	6,980		1980	01-30-80	2,880	
1961	09-06-61	900	ES	1981	08-08-81	1,420	
1962	02-13-62	1,200	ES	1982	08-11-82	2,250	
1963	09-09-63	10,000	ES	1983	03-24-83	2,060	
1964	07-21-64	2,000	ES	1984	10-01-83	3,580	
1965	01-07-65	6,000	ES	1985	12-27-84	12,800	
1966	12-30-65	23,000		1986	08-08-86	2,830	
1967	08-09-67	2,590		1987	03-07-87	763	
1968	02-14-68	1,070		1988	02-03-88	3,650	
1969	01-27-69	1,060		1989	08-18-89	600	
1970	09-06-70	1,960					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
61.8	36.7	6,320	95.0	3.0	22.0	2.2	4.6

09496500 CARRIZO CREEK NEAR SHOW LOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1952-60, 1968-75, 1978-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	397	1.6	35	83	2.4	5.5
NOVEMBER	147	2.5	25	37	1.5	4.0
DECEMBER	762	3.9	84	164	2.0	13.2
JANUARY	758	5.4	81	154	1.9	12.8
FEBRUARY	965	6.3	120	199	1.7	18.9
MARCH	698	6.1	157	182	1.2	24.7
APRIL	350	5.3	55	77	1.4	8.7
MAY	154	2.4	22	29	1.3	3.4
JUNE	41	0.87	13	12	0.92	2.0
JULY	41	1.3	14	12	0.87	2.2
AUGUST	42	3.2	18	11	0.61	2.8
SEPTEMBER	30	0.91	11	8.8	0.80	1.7
ANNUAL	201	5.8	53	53	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-61, 1969-75, 1979-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	1.6	0.67	0.42	0.29	0.19	0.14
3	1.7	0.74	0.49	0.34	0.23	0.18
7	1.9	0.87	0.59	0.43	0.30	0.24
14	2.2	1.0	0.71	0.52	0.36	0.29
30	3.0	1.4	0.96	0.69	0.48	0.37
60	4.5	2.3	1.6	1.1	0.76	0.59
90	5.7	3.2	2.3	1.7	1.3	1.0
120	6.7	4.0	3.0	2.4	1.9	1.6
183	8.8	5.8	4.9	4.2	3.7	3.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1951-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,980	7,070	11,300	19,000	26,600	36,400

WEIGHTED SKEW (LOGS)= 0.19
MEAN (LOGS)= 3.49
STANDARD DEV. (LOGS)= 0.43

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-60, 1968-75, 1978-89

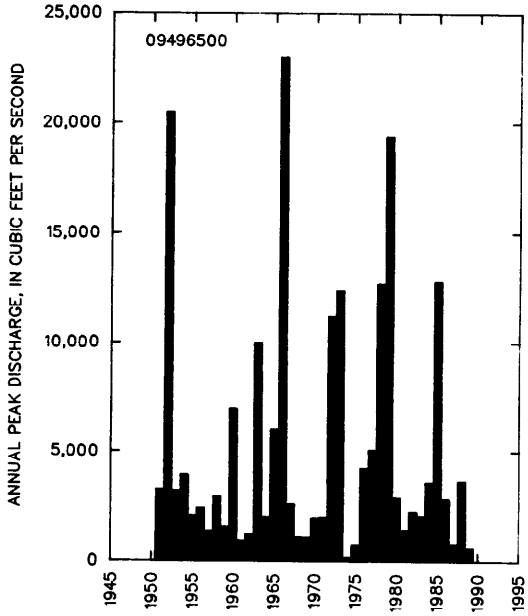
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	870	2,900	5,460	10,800	16,700	24,800
3	590	1,920	3,470	6,400	9,410	13,200
7	367	1,130	2,000	3,620	5,260	7,310
15	225	661	1,140	2,000	2,860	3,930
30	151	427	723	1,250	1,770	2,410
60	105	287	475	800	1,110	1,480
90	84	233	387	652	903	1,200

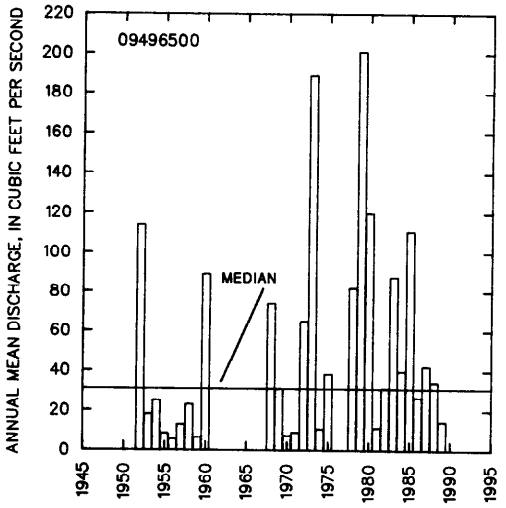
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-60, 1968-75, 1978-89

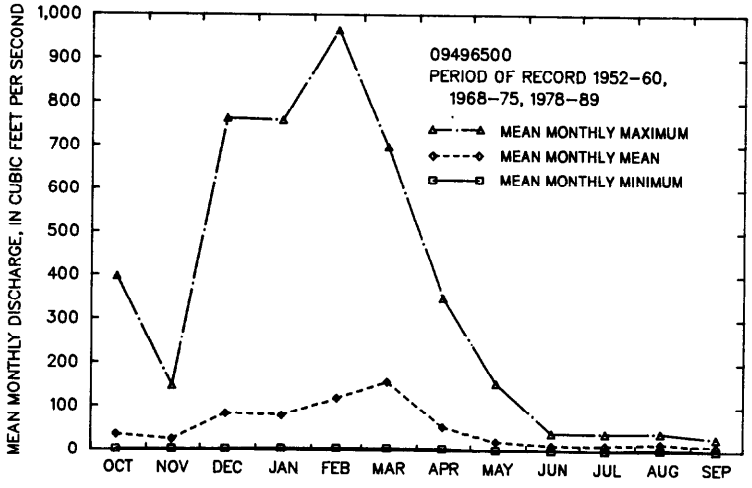
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
689	204	83	49	36	26	18	12	8.2	6.3	4.8	2.6	1.5	0.96	0.74	0.56	0.41

† Reliability of values in column is uncertain, and potential errors are large.

09496500 CARRIZO CREEK NEAR SHOW LOW, AZ--CONTINUED







09496600 CIBECUE NO. 1, TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ

LOCATION.--Lat 33°59'28", long 110°19'27", in NW¼ sec.22, T.7 N., R.19 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on an unnamed tributary to Carrizo Creek, on Cibecue Ridge, 3.0 mi upstream from mouth of main stem, and 25 mi southwest of Show Low.

DRAINAGE AREA.--0.10 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1958	09-04-58	24	
1959	08-17-59	39	
1960	10-29-59	8.3	
1961	08-18-61	16	
1962	07-26-62	75	ES
1963	08-26-63	127	
1964	07-31-64	134	
1965	09-03-65	38.3	
1966	07-23-66	76.5	
1967	07-27-67	165	
1968	08-09-68	27.2	
1969	08-02-69	61	
1970	07-23-70	15.9	
1971	08-15-71	39.5	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
364	0.30	5,390	100	3.0	18.0	1.9	4.1

09496600 CIBECUE No. 1 TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1959-71

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.05	0.00	0.01	0.02	1.6	9.5
NOVEMBER	0.01	0.00	0.00	0.01	1.1	3.6
DECEMBER	0.07	0.00	0.01	0.02	2.4	6.5
JANUARY	0.00	0.00	0.00	0.00		0.0
FEBRUARY	0.00	0.00	0.00	0.00		0.0
MARCH	0.00	0.00	0.00	0.00		0.0
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	0.00	0.00	0.00	0.00		0.0
JULY	0.27	0.00	0.04	0.08	1.8	34.5
AUGUST	0.13	0.00	0.04	0.04	1.0	32.1
SEPTEMBER	0.06	0.00	0.02	0.02	1.0	13.7
ANNUAL	0.03	0.00	0.01	0.01	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-71

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90						
120						
183						

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-71

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
44	92	133	195	248	307

WEIGHTED SKEW (LOGS)= -0.17
MEAN (LOGS)= 1.64
STANDARD DEV. (LOGS)= 0.40

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-71

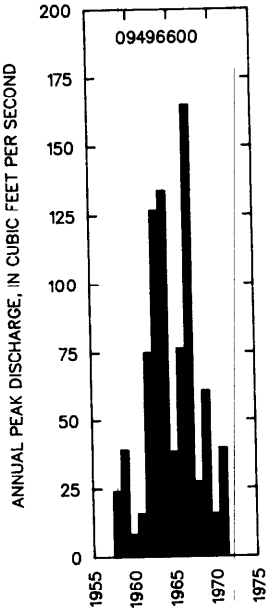
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1.08	1.93	2.63	3.67	4.55	5.54
3	0.41	0.75	1.02	1.39	1.69	2.02
7	0.22	0.41	0.56	0.78	0.96	1.15
15	0.12	0.24	0.35	0.54	0.73	0.97
30	0.07	0.13	0.20	0.32	0.44	0.60
60	0.04	0.07	0.11	0.17	0.24	0.33
90	0.03	0.05	0.08	0.12	0.17	0.23

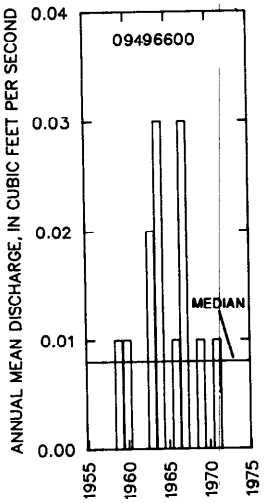
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-71

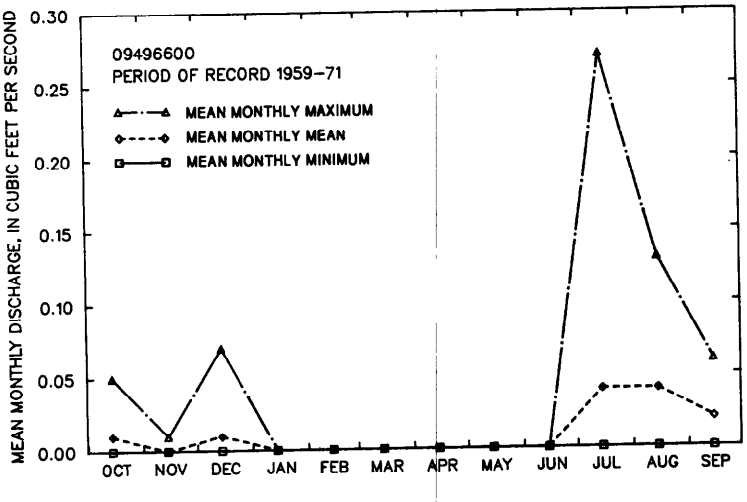
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09496600 CIBECUE NO. 1 TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ--CONTINUED







GILA RIVER BASIN

09496700 CIBECUE NO. 2, TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ

LOCATION.--Lat 33°59'17", long 110°18'38", in NE¼ sec.22, T.7 N., R.19 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on an unnamed tributary to Carrizo Creek, on Cibecue Ridge, 2.0 mi upstream from mouth of main stem and 25 mi southwest of Show Low.

DRAINAGE AREA.--0.07 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	09-04-58	30
1959	08-19-59	34
1960	12-25-59	11
1961	09-06-61	25
1962	07-29-62	75
1963	08-20-63	120
1964	07-26-64	66.2
1965	09-03-65	95.5
1966	09-13-66	26.8
1967	07-27-67	48.7
1968	08-09-68	22.3
1969	07-28-69	45.2
1970	08-09-70	39.2
1971	08-12-71	50.8

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
200.0	0.40	5,240	100.0	3.0	18.0	2.0	4.1

09496700 CIBECUE No. 2 TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1959-71

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.05	0.00	0.01	0.01	1.6	9.0
NOVEMBER	0.01	0.00	0.00	0.00	1.6	3.0
DECEMBER	0.09	0.00	0.01	0.03	2.2	11.9
JANUARY	0.03	0.00	0.00	0.01	2.8	3.0
FEBRUARY	0.00	0.00	0.00	0.00		0.0
MARCH	0.01	0.00	0.00	0.00	3.6	0.7
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	0.00	0.00	0.00	0.00		0.0
JULY	0.13	0.00	0.02	0.04	1.8	18.7
AUGUST	0.21	0.00	0.04	0.06	1.5	36.6
SEPTEMBER	0.06	0.00	0.02	0.02	1.1	17.2
ANNUAL	0.03	0.00	0.01	0.01	0.93	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1960-71

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90						
120						
183						

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1958-71

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
43	69	88	116	138	161

WEIGHTED SKEW (LOGS)= 0.05
MEAN (LOGS)= 1.64
STANDARD DEV. (LOGS)= 0.24

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1959-71

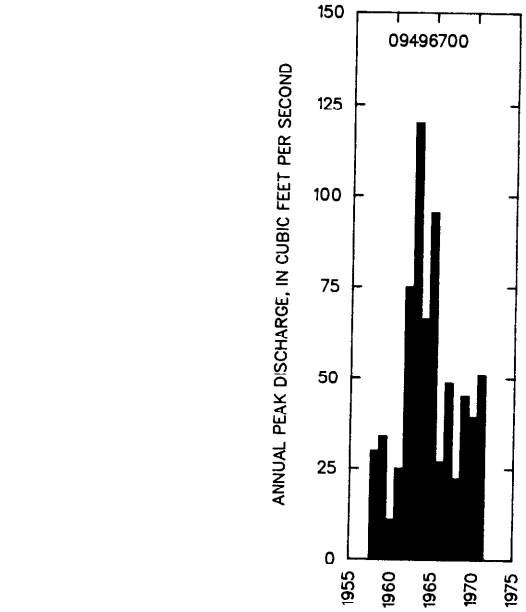
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	0.77	1.27	1.70	2.38	2.99	3.71
3	0.32	0.52	0.67	0.89	1.08	1.28
7	0.16	0.29	0.41	0.59	0.76	0.95
15	0.09	0.18	0.25	0.35	0.44	0.55
30	0.06	0.10	0.15	0.22	0.29	0.37
60	0.03	0.06	0.09	0.13	0.17	0.22
90	0.03	0.05	0.06	0.10	0.13	0.18

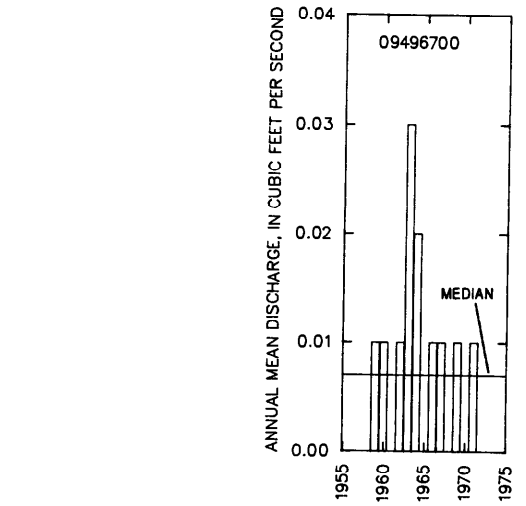
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-71

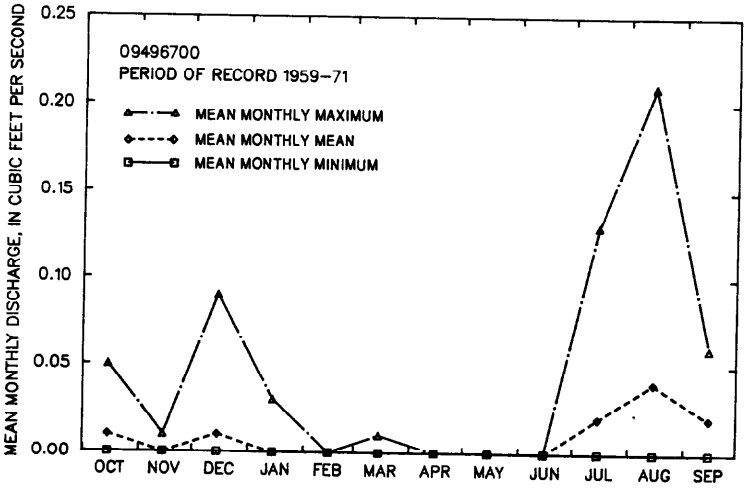
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09496700 CIBECUE NO.2, TRIBUTARY TO CARRIZO CREEK, NEAR SHOW LOW, AZ--CONTINUED







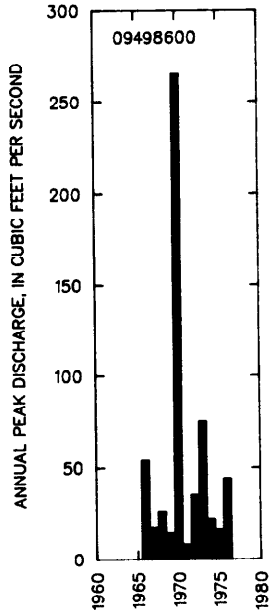
09496800 CARRIZO CREEK TRIBUTARY NEAR SHOW LOW, AZ

LOCATION.--Lat 33°57'16", long 110°19'53", Gila County, Hydrologic Unit 15060104, at U.S. Highway 60, 28 mi southwest of Show Low.

DRAINAGE AREA.--4.63 mi^2, of which 2.08 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	09-09-63	655
1964	07-31-64	1,260
1965	09-03-65	286
1966	07-24-66	112
1967	07-27-67	1,090
1968	08-09-68	200
1969	11-14-68	150
1970	08-04-70	290
1971	08-00-71	930
1972	00-00-72	0
1973	10-19-72	150
1974	07-19-74	750
1975	10-29-74	130
1976	00-00-76	100



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
287	660	1,020	1,620	2,180	2,850

WEIGHTED SKEW (LOGS)= -0.00
MEAN (LOGS)= 2.46
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
306	1.7	5,810	90.0	3.0	20.0	1.9	4.2

09497500 SALT RIVER NEAR CHRYSOTILE, AZ

LOCATION.--Lat 33°47'53", long 110°29'57", in sec.25, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in San Carlos Indian Reservation, on left bank 1,200 ft upstream from bridge on U.S. Highway 60, 5.7 mi northeast of Chrysotile, 8 mi upstream from Cibecue Creek, and 33 mi downstream from confluence of Black and White Rivers.

DRAINAGE AREA.--2,849 mi^2.

REMARKS.--Several diversions for irrigation above station of about 3,100 acres, one diversion into the basin (record of Forestdale Creek diversion from Show Low Creek, near Show Low), and one diversion out of the basin (see record of Willow Creek diversion from Black River, near Morenci).

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-19-16	[1]74,000	HP	1957	08-02-57	3,760	
1925	03-08-25	6,930		1958	03-22-58	19,700	
1926	04-06-26	13,600		1959	08-20-59	7,290	
1927	02-17-27	19,900		1960	12-26-59	26,200	
1928	07-21-28	1,670		1961	08-30-61	2,130	
1929	09-23-29	11,500		1962	01-25-62	5,630	
1930	08-11-30	11,700		1963	02-11-63	6,220	
1931	02-15-31	7,400		1964	07-26-64	2,780	
1932	02-10-32	40,000		1965	01-08-65	15,800	
1933	02-28-33	2,880		1966	12-30-65	41,100	
1934	08-20-34	3,850		1967	08-12-67	5,060	
1935	04-09-35	15,700		1968	01-28-68	8,730	
1936	02-17-36	13,200		1969	10-04-68	4,940	
1937	02-07-37	52,900		1970	09-06-70	5,000	
1938	03-04-38	19,000		1971	08-13-71	20,400	
1939	04-05-39	8,530		1972	12-26-71	23,300	
1940	08-15-40	6,300		1973	10-20-72	42,100	
1941	03-14-41	52,200		1974	08-06-74	1,680	
1942	01-13-42	5,380		1975	10-29-74	7,080	
1943	03-05-43	12,800		1976	02-10-76	6,070	
1944	10-19-43	2,380		1977	07-23-77	3,760	
1945	03-27-45	4,450		1978	03-02-78	46,700	
1946	09-19-46	9,600		1979	12-18-78	[2]70,400	
1947	09-18-47	8,160		1980	02-15-80	58,300	
1948	04-12-48	5,730		1981	04-14-81	2,060	
1949	01-14-49	14,200		1982	02-11-82	13,200	
1950	07-21-50	2,500		1983	03-25-83	15,700	
1951	08-29-51	5,150		1984	10-02-83	56,600	
1952	01-14-52	51,500		1985	12-28-84	34,600	
1953	07-30-53	3,680		1986	02-16-86	14,000	
1954	03-23-54	28,700		1987	12-08-86	8,370	
1955	08-23-55	8,820		1988	09-02-88	10,600	
1956	01-29-56	1,640		1989	03-12-89	1,740	

[1]Highest since 1906.
[2]Highest since 1916.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
31.9	155	6,730	81.0	3.0	22.8	2.2	4.4

09497500 SALT RIVER NEAR CHRYSOTILE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1925-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	3,780	79	358	586	1.6	4.5
NOVEMBER	1,300	112	270	209	0.77	3.4
DECEMBER	3,980	113	498	786	1.6	6.3
JANUARY	4,250	130	545	707	1.3	6.9
FEBRUARY	6,180	145	851	1,010	1.2	10.8
MARCH	6,030	187	1,430	1,200	0.84	18.1
APRIL	4,850	181	1,740	1,280	0.74	22.0
MAY	5,070	106	929	936	1.0	11.7
JUNE	1,190	74	315	257	0.82	4.0
JULY	547	91	225	103	0.46	2.8
AUGUST	1,250	135	410	237	0.58	5.2
SEPTEMBER	1,180	69	343	255	0.74	4.3
ANNUAL	2,010	185	658	430	0.65	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1926-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	102	77	67	60	52	48
3	105	79	68	61	53	48
7	109	82	71	63	56	51
14	117	88	76	68	59	54
30	129	98	85	76	68	62
60	148	113	100	91	82	77
90	164	129	117	108	100	95
120	179	142	129	121	113	110
183	217	165	148	138	129	125

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916, 1925-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
9,750	23,600	37,800	62,800	87,500	118,000

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 3.99
STANDARD DEV. (LOGS)= 0.45

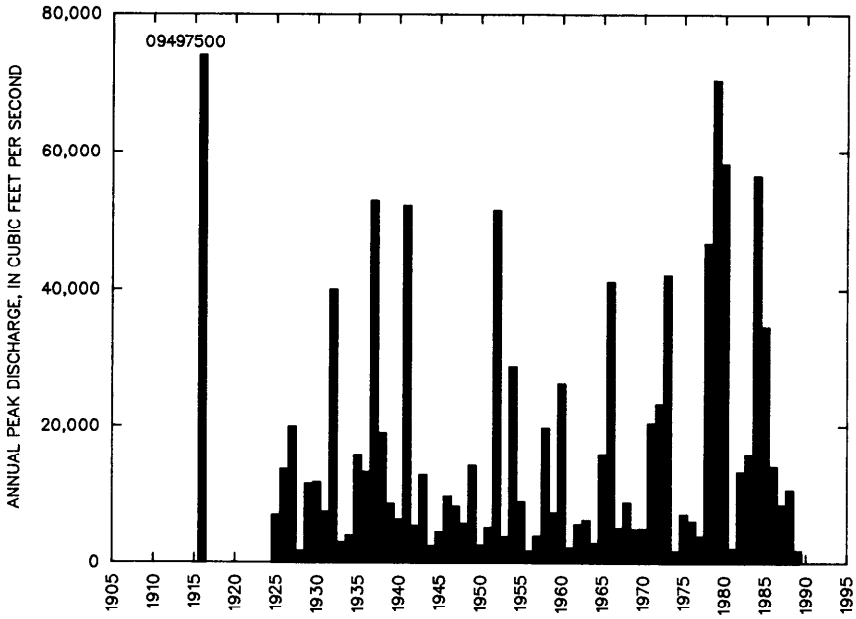
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1925-89

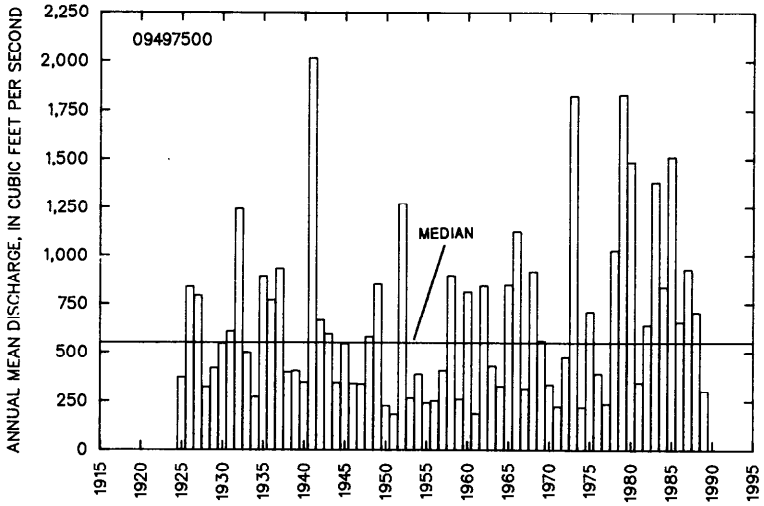
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	5,600	14,100	23,000	39,300	55,900	76,900
3	4,260	9,800	15,400	25,400	35,300	47,800
7	3,080	6,330	9,350	14,300	19,000	24,500
15	2,360	4,480	6,270	9,000	11,400	14,000
30	1,860	3,390	4,610	6,340	7,770	9,320
60	1,430	2,630	3,610	5,040	6,230	7,550
90	1,200	2,250	3,110	4,380	5,450	6,640

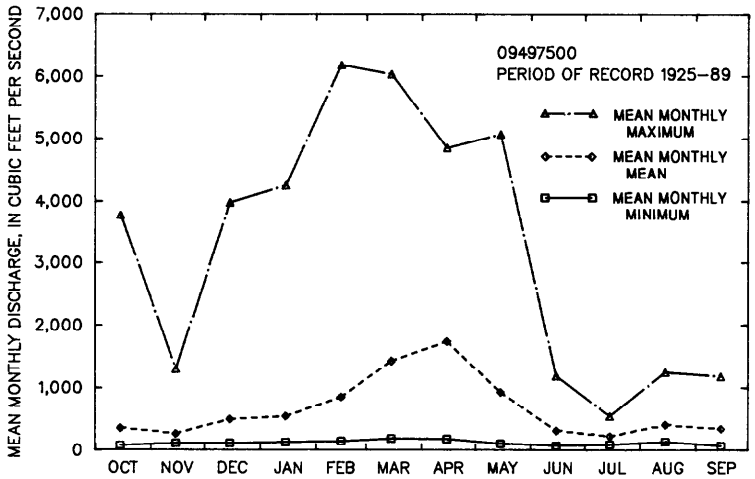
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
5,130	2,560	1,550	1,060	788	496	354	265	216	184	159	129	108	88	78	71	61

09497500 SALT RIVER NEAR CHRYSOTILE, AZ--CONTINUED







09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ

LOCATION.--Lat 33°50'35", long 110°33'25", in E sec.8, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Fort Apache Indian Reservation, on right bank 0.5 mi upstream from mouth and 7 mi north of Chrysotile.

DRAINAGE AREA.--295 mi^2.

REMARKS.--Small diversions for irrigation near the village of Cibecue.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1959	07-29-59	4,600	1975	10-29-74	3,180
1960	12-26-59	7,080	1976	09-27-76	3,500
1961	07-21-61	1,440	1977	09-02-77	22,200
1962	09-24-62	519	1978	03-01-78	6,540
1963	08-31-63	8,180	1979	12-18-78	7,740
1964	07-29-64	7,600	1980	02-15-80	10,600
1965	01-07-65	2,950	1981	08-09-81	1,800
1966	12-30-65	8,800	1982	02-11-82	1,530
1967	07-27-67	2,960	1983	10-30-82	5,150
1968	03-10-68	1,200	1984	10-01-83	9,780
1969	08-12-69	6,580	1985	12-27-84	6,190
1970	09-06-70	3,640	1986	07-15-86	2,780
1971	09-01-71	5,440	1987	10-11-86	2,680
1972	10-17-71	1,650	1988	08-31-88	2,300
1973	10-19-72	6,880	1989	07-17-89	1,340
1974	07-19-74	3,180			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
79.6	38.5	5,700	78.0	3.0	20.7	2.2	4.2

09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1960-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	277	11	39	53	1.3	7.2
NOVEMBER	186	9.1	30	32	1.1	5.5
DECEMBER	368	11	62	84	1.3	11.3
JANUARY	209	11	48	48	1.0	8.8
FEBRUARY	550	11	74	102	1.4	13.5
MARCH	477	12	102	117	1.2	18.6
APRIL	274	11	60	62	1.0	10.9
MAY	131	5.6	26	25	0.97	4.7
JUNE	40	5.0	15	8.4	0.58	2.6
JULY	69	6.6	25	13	0.54	4.5
AUGUST	106	13	36	20	0.57	6.6
SEPTEMBER	85	13	32	19	0.61	5.8
ANNUAL	133	16	46	31	0.67	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1961-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	8.7	5.9	4.9	4.2	3.5	3.1
3	8.8	6.0	5.0	4.2	3.6	3.2
7	9.1	6.3	5.2	4.5	3.8	3.4
14	9.6	6.7	5.6	4.8	4.1	3.7
30	10	7.3	6.1	5.2	4.4	3.9
60	12	8.5	7.0	5.9	4.8	4.2
90	14	10	8.3	7.1	5.9	5.2
120	17	12	11	9.1	7.7	6.8
183	20	15	14	12	11	11

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
4,020	7,470	10,300	14,400	18,000	21,800

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 3.60
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1960-89

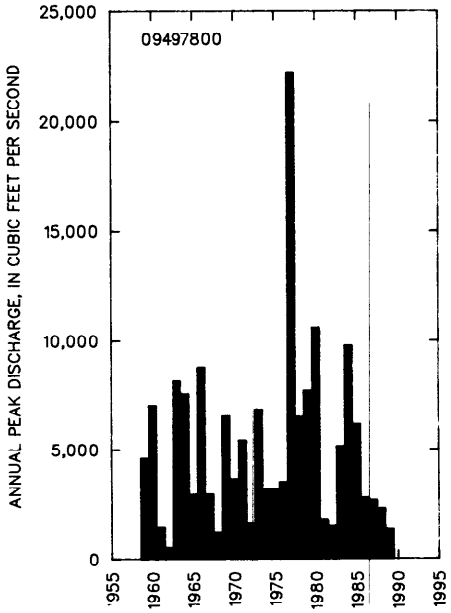
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	761	1,750	2,760	4,590	6,450	8,810
3	415	924	1,450	2,400	3,360	4,600
7	242	521	804	1,310	1,820	2,470
15	159	334	510	824	1,140	1,550
30	115	234	352	556	757	1,010
60	86	168	244	369	488	632
90	72	140	203	307	405	523

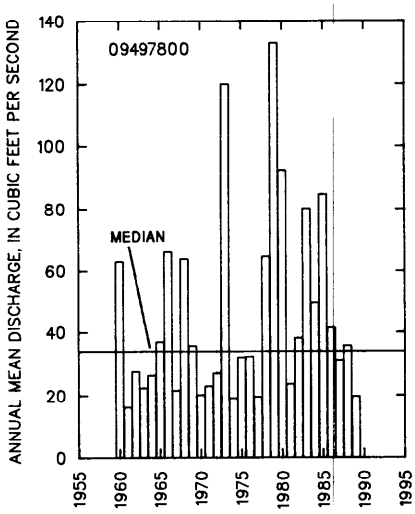
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-89

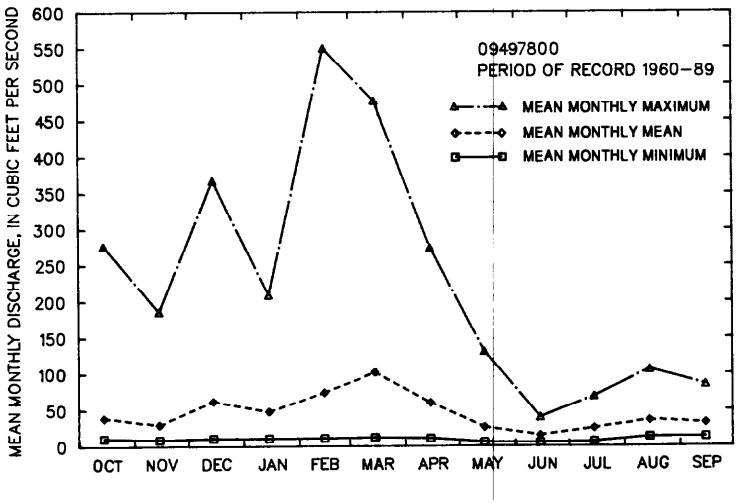
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
409	151	89	59	46	31	24	20	17	15	13	9.9	7.9	6.4	5.6	5.0	4.3

† Reliability of values in column is uncertain, and potential errors are large.

09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ--CONTINUED







GILA RIVER BASIN

09497900 CHERRY CREEK NEAR YOUNG, AZ

LOCATION.--Lat 34°04'58", long 110°55'25", in SE¼NE¼ sec.32, T.9 N., R.14 E., Gila County, Hydrologic Unit 15060103, on left bank 0.3 mi downstream from Deadman Canyon and 2 mi southeast of Young.

DRAINAGE AREA.--62.1 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	* ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-22-63	2,700
1964	07-30-64	266
1965	08-17-65	3,280
1966	12-22-65	3,400
1967	07-31-67	2,670
1968	01-28-68	800
1969	01-26-69	616
1970	09-05-70	3,100
1971	07-17-71	920
1972	10-24-71	765
1973	10-19-72	7,290
1974	08-02-74	950
1975	07-22-75	258
1976	02-09-76	2,300
1977	09-02-77	530
1978	03-01-78	2,480

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
106	18.6	6,030	75.0	3.0	24.8	2.7	5.5

09497900 CHERRY CREEK NEAR YOUNG, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-78, 1980-88

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	296	4.6	30	64	2.1	6.7
NOVEMBER	101	4.5	19	23	1.2	4.1
DECEMBER	537	4.8	67	125	1.9	15.0
JANUARY	179	6.7	43	46	1.1	9.6
FEBRUARY	568	6.0	98	133	1.4	21.7
MARCH	423	6.1	96	126	1.3	21.4
APRIL	195	5.3	30	42	1.4	6.7
MAY	66	4.9	13	13	0.99	2.9
JUNE	18	4.4	7.7	3.2	0.42	1.7
JULY	23	5.6	9.9	4.4	0.44	2.2
AUGUST	85	5.5	17	17	0.95	3.9
SEPTEMBER	151	3.6	18	30	1.7	4.0
ANNUAL	130	8.2	37	31	0.84	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-78, 1981-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	5.2	4.2	3.8	3.6	3.3	3.1
3	5.4	4.4	4.0	3.8	3.5	3.3
7	5.5	4.5	4.1	3.8	3.6	3.4
14	5.6	4.6	4.3	4.0	3.7	3.5
30	6.0	5.0	4.6	4.2	3.9	3.7
60	6.5	5.3	4.8	4.5	4.1	3.9
90	7.1	5.7	5.2	4.8	4.3	4.1
120	7.6	6.4	5.9	5.5	5.1	4.9
183	9.5	7.5	6.7	6.2	5.7	5.4

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON 21 YEARS OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,220	5,340	8,460	13,800	19,000	25,300

WEIGHTED SKEW (LOGS)= 0.02
MEAN (LOGS)= 3.35
STANDARD DEV. (LOGS)= 0.45

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-78, 1980-88

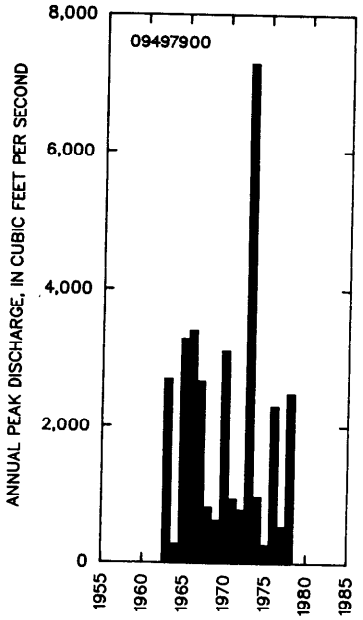
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	765	2,180	3,610	6,010	8,210	10,700
3	508	1,310	2,040	3,150	4,080	5,070
7	320	773	1,170	1,760	2,250	2,760
15	200	474	720	1,090	1,420	1,770
30	129	304	467	727	961	1,230
60	88	205	315	494	656	845
90	68	155	237	370	491	632

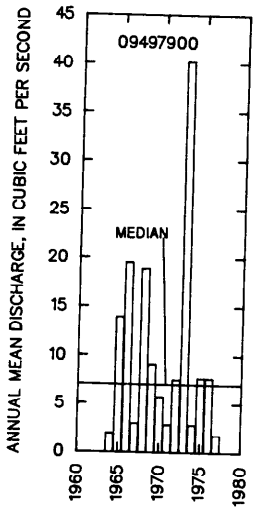
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-78, 1980-88

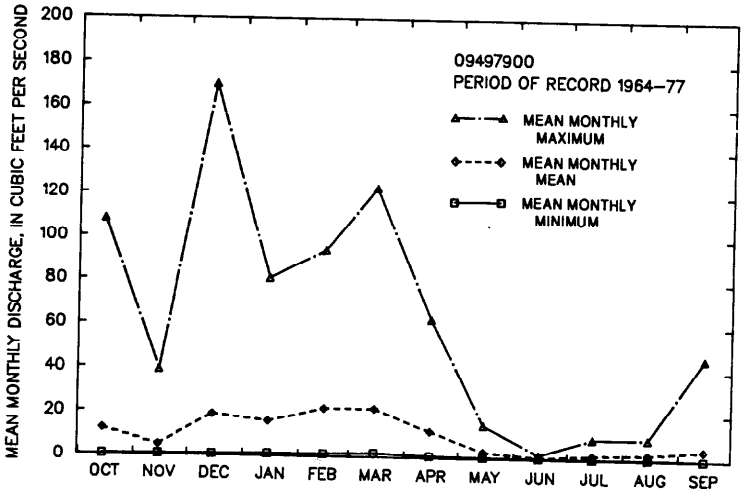
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
546	141	62	37	25	15	11	9.3	8.0	7.2	6.3	5.4	4.8	4.3	4.1	4.0	3.0

† Reliability of values in column is uncertain, and potential errors are large.

09497900 CHERRY CREEK NEAR YOUNG, AZ--CONTINUED







09497980 CHERRY CREEK NEAR GLOBE, AZ

LOCATION.--Lat 33°49'40", long 110°51'20", in SW¼ sec.30, T.6 N., R.15 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest, on right bank 0.2 mi upstream from Devils Chasm, 13 mi upstream from mouth, and 30 mi north of Globe. Prior to January 17, 1979, on left bank at site 125 ft downstream.

DRAINAGE AREA.--200 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	12-22-65	6,620
1967	08-06-67	3,600
1968	01-28-68	1,490
1969	01-26-69	928
1970	09-06-70	4,300
1971	08-19-71	1,260
1972	10-24-71	1,010
1973	10-19-72	8,300
1974	08-06-74	596
1975	10-24-74	715
1976	02-09-76	3,820
1977	09-11-77	408
1978	03-01-78	5,370
1979	01-17-79	[1]15,700
1980	02-15-80	13,500
1981	07-17-81	151
1982	03-13-82	1,920
1983	12-01-82	2,800
1984	10-01-83	1,620
1985	12-27-84	8,970
1986	11-30-85	1,690
1987	03-05-87	358
1988	08-31-88	5,170
1989	02-05-89	563

[1]Highest since 1960.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
87.9	36.4	5,600	81.0	2.9	24.0	2.6	5.0

09497980 CHERRY CREEK NEAR GLOBE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-78, 1980-88

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	296	4.6	30	64	2.1	6.7
NOVEMBER	101	4.5	19	23	1.2	4.1
DECEMBER	537	4.8	67	125	1.9	15.0
JANUARY	179	6.7	43	46	1.1	9.6
FEBRUARY	568	6.0	98	133	1.4	21.7
MARCH	423	6.1	96	126	1.3	21.4
APRIL	195	5.3	30	42	1.4	6.7
MAY	66	4.9	13	13	0.99	2.9
JUNE	18	4.4	7.7	3.2	0.42	1.7
JULY	23	5.6	9.9	4.4	0.44	2.2
AUGUST	85	5.5	17	17	0.95	3.9
SEPTEMBER	151	3.6	18	30	1.7	4.0
ANNUAL	130	8.2	37	31	0.84	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-78, 1981-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	5.2	4.2	3.8	3.6	3.3	3.1
3	5.4	4.4	4.0	3.8	3.5	3.3
7	5.5	4.5	4.1	3.8	3.6	3.4
14	5.6	4.6	4.3	4.0	3.7	3.5
30	6.0	5.0	4.6	4.2	3.9	3.7
60	6.5	5.3	4.8	4.5	4.1	3.9
90	7.1	5.7	5.2	4.8	4.3	4.1
120	7.6	6.4	5.9	5.5	5.1	4.9
183	9.5	7.5	6.7	6.2	5.7	5.4

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
2,150	5,480	8,850	14,700	20,200	27,000

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 3.32
STANDARD DEV. (LOGS)= 0.49

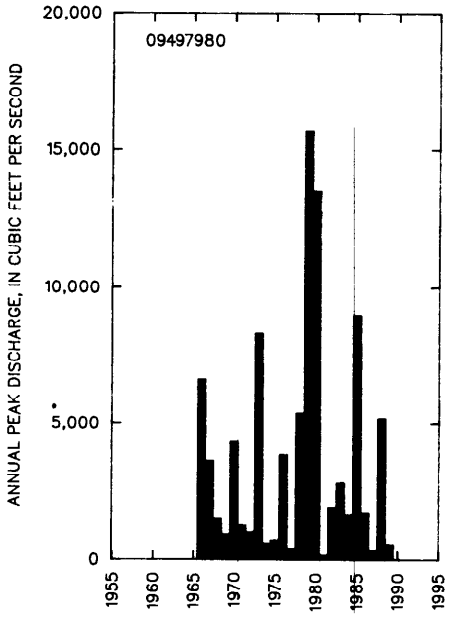
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-78, 1980-88

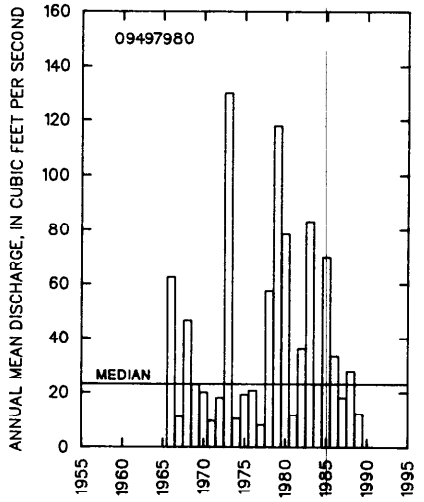
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	765	2,180	3,610	6,010	8,210	10,700
3	508	1,310	2,040	3,150	4,080	5,070
7	320	773	1,170	1,760	2,250	2,760
15	200	474	720	1,090	1,420	1,770
30	129	304	467	727	961	1,230
60	88	205	315	494	656	845
90	68	155	237	370	491	632

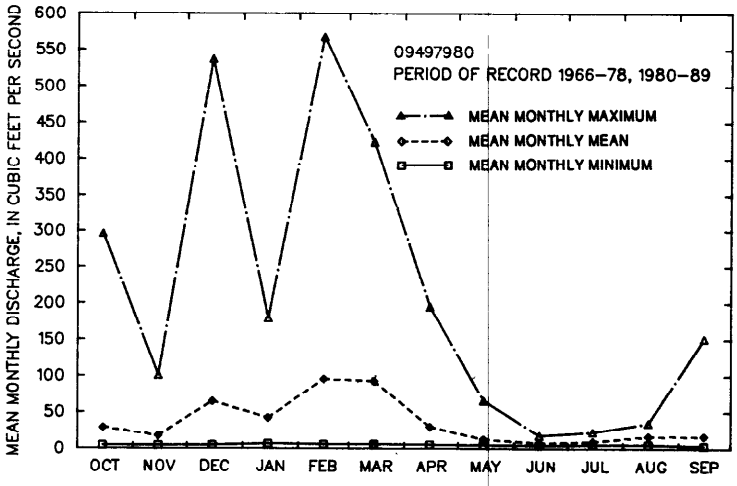
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-78, 1980-88

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
546	141	62	37	25	15	11	9.3	8.0	7.2	6.3	5.4	4.8	4.3	4.1	4.0	3.0

† Reliability of values in column is uncertain, and potential errors are large.


09497980
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
20,000
15,000
10,000
5,000
0
1955
1960
1965
1970
1975
1980
1985
1990
1995


09497980
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
160
140
120
100
80
60
40
20
0
MEDIAN
1955
1960
1965
1970
1975
1980
1985
1990
1995


09497980
PERIOD OF RECORD 1966–78, 1980–89
MEAN MONTHLY MAXIMUM
MEAN MONTHLY MEAN
MEAN MONTHLY MINIMUM
MEAN MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND
600
550
500
450
400
350
300
250
200
150
100
50
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

09498500 SALT RIVER NEAR ROOSEVELT, AZ

LOCATION.--Lat 33°37'10", long 110°55'15", in SE¼NE¼ sec.9, T.3 N., R.14 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest on left bank 100 ft downstream from bridge on State Highway 288, 0.3 mi downstream from Pinal Creek, 1 mi upstream from diversion dam for power canal, 14 mi east of village of Roosevelt, and 17 mi upstream from Roosevelt Dam.

DRAINAGE AREA.--4,306 mi^2.

REMARKS.--Several small diversions for irrigation of about 4,000 acres above station and two transbasin diversions above station, one into basin from Show Low Creek and one out of basin to Willow Creek. Records show inflow to Roosevelt Lake. Tonto Creek also contributes to Roosevelt Lake.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1388	--------	[1]160,000	PF	1956	01-29-56	1,460	
1916	01-19-16	100,000	HP	1957	01-10-57	6,720	
1924	12-28-23	43,000		1958	03-23-58	24,000	
1925	03-09-25	9,000		1959	08-20-59	12,100	
1926	04-07-26	21,000		1960	12-26-59	78,200	
1927	02-18-27	40,000		1961	07-28-61	2,590	
1928	02-05-28	2,600		1962	01-25-62	8,540	
1929	09-23-29	15,000		1963	08-31-63	31,300	
1930	03-17-30	8,300		1964	09-15-64	3,620	
1931	02-15-31	22,000		1965	01-08-65	20,400	
1932	02-10-32	57,000		1966	12-23-65	68,800	
1933	02-28-33	4,200		1967	08-06-67	5,600	
1934	08-04-34	5,500		1968	12-20-67	17,200	
1935	04-09-35	15,200		1969	01-26-69	6,100	
1936	02-17-36	13,800		1970	09-06-70	17,300	
1937	02-07-37	88,000		1971	08-13-71	12,800	
1938	03-04-38	24,100		1972	12-27-71	30,200	
1939	04-05-39	9,050		1973	10-20-72	70,000	
1940	07-16-40	4,610		1974	07-20-74	1,500	
1941	03-14-41	[2]117,000		1975	10-29-74	10,100	
1942	01-13-42	5,140		1976	02-10-76	16,000	
1943	03-05-43	16,500		1977	09-03-77	10,200	
1944	09-26-44	4,560		1978	03-02-78	89,400	
1945	03-27-45	5,450		1979	12-19-78	95,800	
1946	09-19-46	15,100		1980	02-15-80	99,000	
1947	09-19-47	6,170		1981	04-15-81	2,550	
1948	04-13-48	5,960		1982	02-12-82	15,200	
1949	01-14-49	15,500		1983	03-25-83	17,600	
1950	07-21-50	5,930		1984	10-02-83	59,800	
1951	08-28-51	27,600		1985	12-28-84	46,600	
1952	01-18-52	111,000		1986	02-16-86	13,300	
1953	03-09-53	4,320		1987	03-05-87	7,560	
1954	03-23-54	40,800		1988	09-01-88	11,000	
1955	08-24-55	8,640		1989	03-13-89	2,040	

[1]Partridge and Baker (1987).
[2]Highest since 1906.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
23.3	206	6,190	71.0	2.8	22.0	2.3	4.4

09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1914-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4,830	86	461	782	1.7	4.3
NOVEMBER	2,150	122	380	361	0.95	3.5
DECEMBER	6,330	127	786	1,270	1.6	7.3
JANUARY	16,000	161	982	2,020	2.1	9.1
FEBRUARY	9,070	168	1,360	1,760	1.3	12.6
MARCH	10,400	220	1,960	1,920	0.98	18.2
APRIL	6,280	212	2,040	1,550	0.76	18.9
MAY	5,930	127	1,050	1,050	1.0	9.7
JUNE	1,370	79	367	299	0.81	3.4
JULY	3,280	78	341	390	1.2	3.2
AUGUST	3,610	151	599	482	0.80	5.6
SEPTEMBER	1,850	78	460	349	0.76	4.3
ANNUAL	3,250	236	896	653	0.73	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1915-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	128	93	79	69	59	53
3	130	95	81	70	60	54
7	135	99	83	72	62	56
14	144	105	88	76	65	58
30	161	116	98	85	72	65
60	188	138	117	103	89	81
90	213	160	140	126	112	104
120	234	177	157	144	133	126
183	288	210	184	168	154	146

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1388, 1924-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
13,800	36,000	60,000	104,000	150,000	208,000

WEIGHTED SKEW (LOGS)= 0.11
MEAN (LOGS)= 4.15
STANDARD DEV. (LOGS)= 0.48

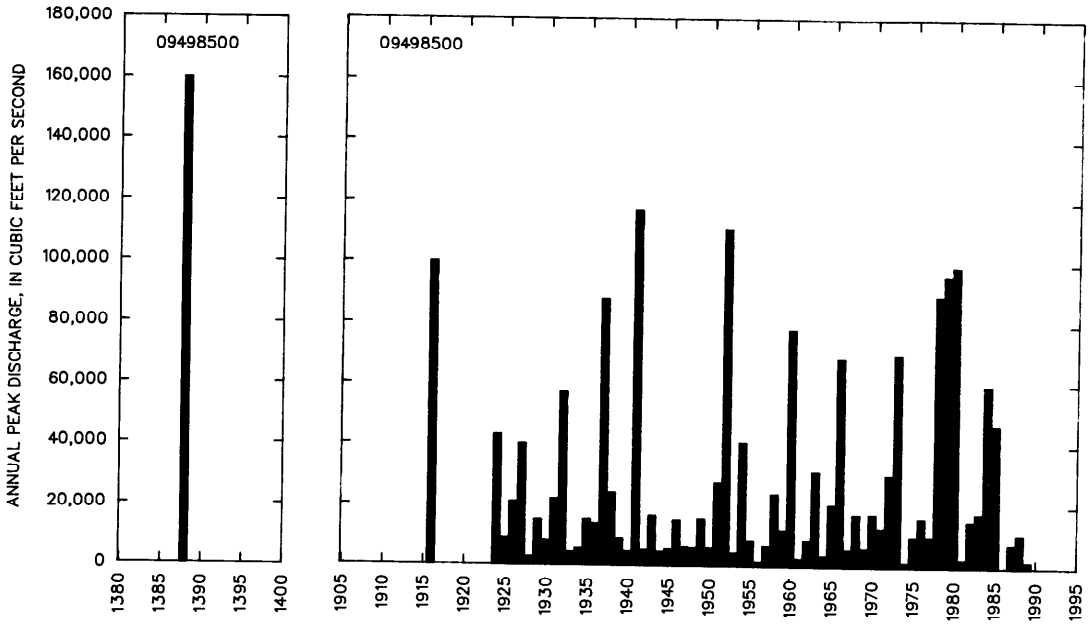
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914-89

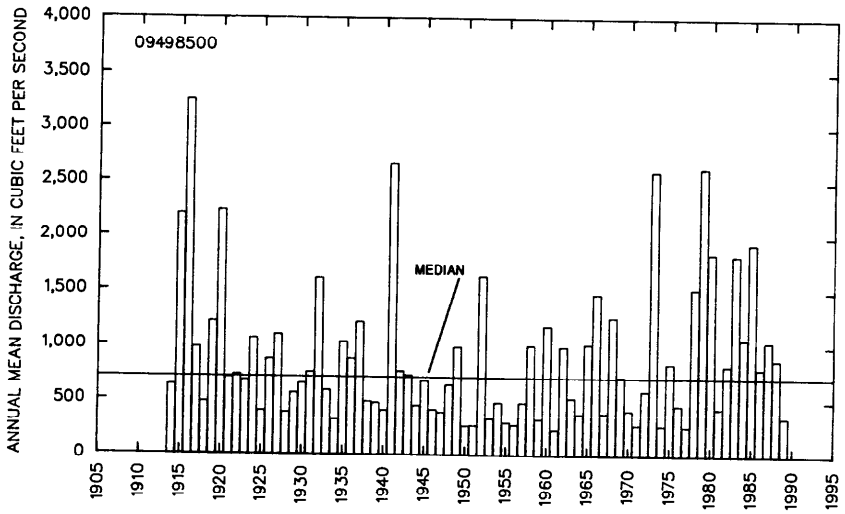
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	9,410	25,000	41,700	72,300	103,000	142,000
3	6,770	16,900	27,600	47,300	67,400	93,000
7	4,590	10,300	16,000	26,000	35,800	48,100
15	3,200	6,610	9,850	15,300	20,500	26,900
30	2,440	4,750	6,790	10,000	12,900	16,300
60	1,850	3,550	5,020	7,310	9,350	11,700
90	1,540	3,010	4,310	6,370	8,220	10,400

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-89

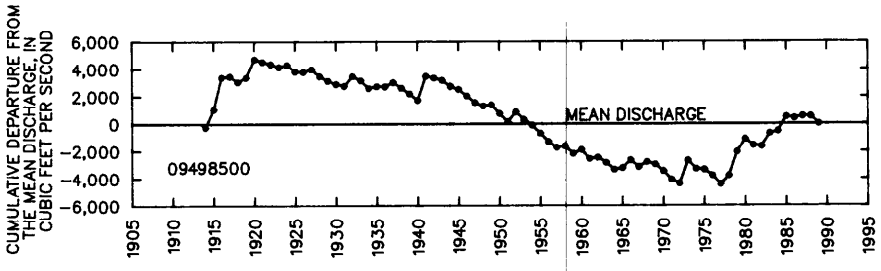
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
7,100	3,360	2,040	1,380	1,010	643	456	343	276	235	198	157	128	102	90	80	66

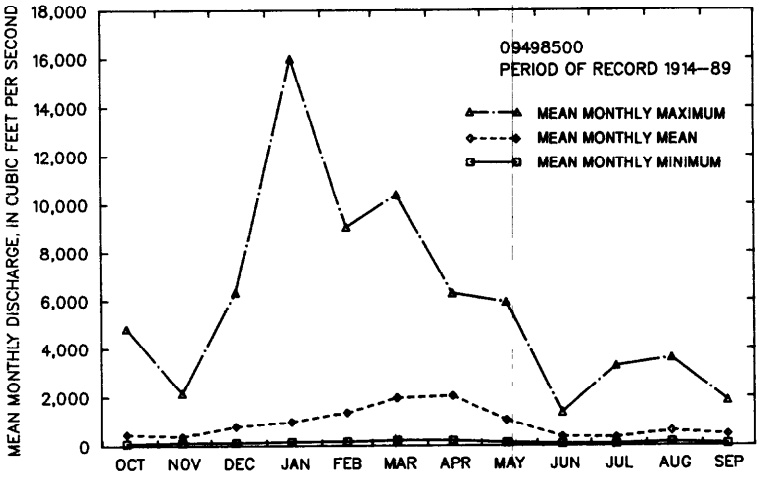
09498500 SALT RIVER NEAR ROOSEVELT, AZ--CONTINUED





09498500 SALT RIVER NEAR ROOSEVELT, AZ--CONTINUED





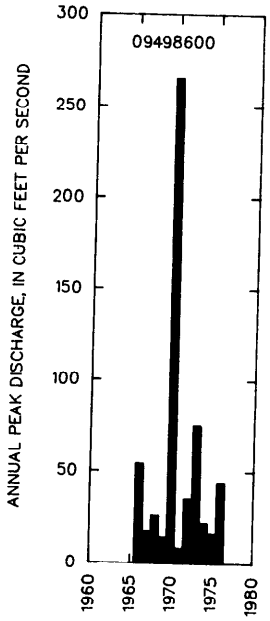
09498600 CHRISTOPHER CREEK TRIBUTARY NEAR KOHL'S RANCH, AZ

LOCATION.--Lat 34°19'20", long 111°04'00", in NE¼SE¼ sec.22, T.11 N., R.12 E., Gila County, Hydrologic Unit 15060105, at State Highway 160, 1.8 mi east of Kohl's Ranch, and 15.5 mi northeast of Payson.

DRAINAGE AREA.--0.66 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	12-22-65	54.0
1967	00-00-67	17.0
1968	08-10-68	26.0
1969	01-26-69	14.0
1970	09-05-70	265
1971	08-00-71	8.0
1972	08-06-72	35.0
1973	10-19-72	75.0
1974	08-05-74	22.0
1975	07-00-75	16.0
1976	02-09-76	44.0



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
30.2	69.5	110	182	256	348

WEIGHTED SKEW (LOGS)=	0.24
MEAN (LOGS)=	1.50
STANDARD DEV. (LOGS)=	0.42

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
510	1.7	6,080	73.0	3.0	29.0	3.5	6.0

09498800 TONTO CREEK NEAR GISELA, AZ

LOCATION.--Lat 34°07'44", long 111°15'17", in NE¼ sec.18, T.9 N., R.11 E., Gila County, Hydrologic Unit 15060105, in Tonto National Forest, on left bank 0.2 mi upstream from Houston Creek, and 1.5 mi northeast of Gisela.

DRAINAGE AREA.--430 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1965	01-07-65	12,600
1966	12-22-65	30,000
1967	12-07-66	8,280
1968	01-28-68	14,800
1969	01-26-69	10,100
1970	09-05-70	38,000
1971	08-19-71	3,300
1972	10-17-71	2,750
1973	10-19-72	26,500
1974	08-06-74	2,400
1975	10-29-74	1,860

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
126	29.6	5,810	79.0	3.0	24.7	2.8	5.5

09498800 TONTO CREEK NEAR GISELA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-75

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	761	7.8	118	238	2.0	8.2
NOVEMBER	326	11	67	97	1.5	4.6
DECEMBER	1,970	16	344	603	1.8	23.9
JANUARY	602	15	182	227	1.2	12.7
FEBRUARY	753	15	168	248	1.5	11.7
MARCH	1,160	15	242	343	1.4	16.8
APRIL	568	11	132	186	1.4	9.2
MAY	235	6.8	46	68	1.5	3.2
JUNE	39	3.3	14	9.6	0.68	1.0
JULY	49	8.3	22	13	0.59	1.5
AUGUST	103	6.7	40	30	0.77	2.7
SEPTEMBER	481	8.1	64	147	2.3	4.5
ANNUAL	377	24	120	112	0.93	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-75

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	5.7	3.4	2.5	1.9	1.3	1.0
3	5.8	3.6	2.6	2.0	1.4	1.1
7	6.1	3.8	2.8	2.1	1.5	1.1
14	6.8	4.2	3.0	2.3	1.5	1.2
30	8.0	5.1	3.6	2.6	1.7	1.2
60	9.6	6.6	5.0	3.9	2.7	2.1
90	13	9.2	7.4	6.1	4.6	3.8
120	15	11	9.2	7.7	6.2	5.3
183	20	15	12	10	8.4	7.1

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-75

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
8,810	21,500	33,800	54,200	73,200	95,500

WEIGHTED SKEW (LOGS)= -0.14
MEAN (LOGS)= 3.93
STANDARD DEV. (LOGS)= 0.47

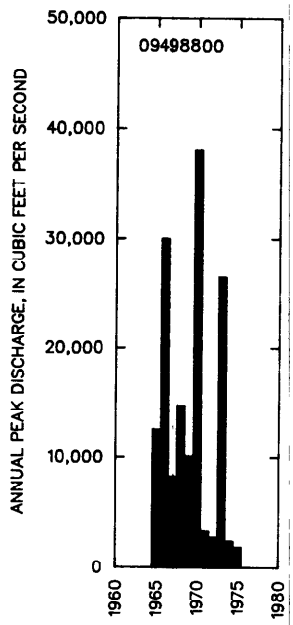
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-75

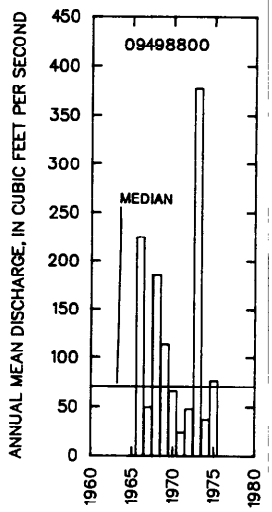
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	3,400	8,140	12,400	18,900	24,400	30,500
3	2,090	4,690	6,930	10,300	13,100	16,100
7	1,160	2,360	3,290	4,570	5,580	6,610
15	703	1,420	2,050	3,020	3,880	4,850
30	436	962	1,480	2,380	3,250	4,330
60	294	682	1,060	1,720	2,350	3,120
90	234	531	814	1,280	1,720	2,250

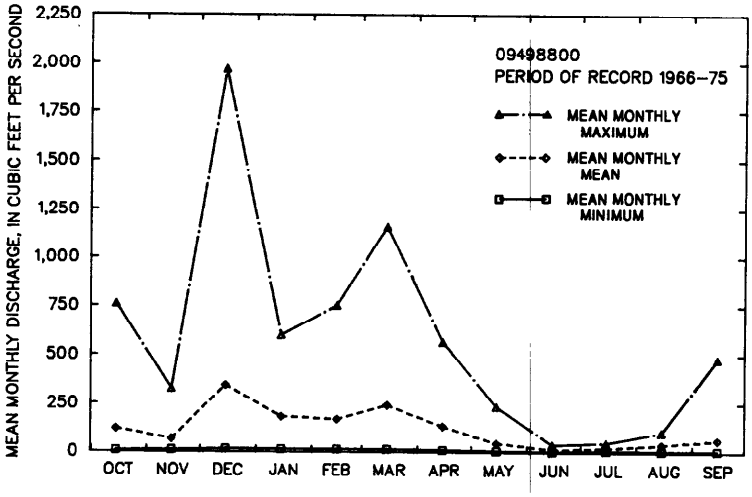
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-75

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,740	454	214	130	85	41	27	21	17	14	11	8.4	6.2	4.3	3.7	2.2	1.7

† Reliability of values in column is uncertain, and potential errors are large.


09498800
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
50,000
40,000
30,000
20,000
10,000
0
1960
1965
1970
1975
1980


09498800
MEDIAN
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
450
400
350
300
250
200
150
100
50
0
1960
1965
1970
1975
1980


09498800
PERIOD OF RECORD 1966–75
MEAN MONTHLY MAXIMUM
MEAN MONTHLY MEAN
MEAN MONTHLY MINIMUM
MEAN MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND
2,250
2,000
1,750
1,500
1,250
1,000
750
500
250
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

09498870 RYE CREEK NEAR GISELA, AZ

LOCATION.--Lat 34°01'57", long 111°17'26", in SW¼ sec.13, T.8 N., R.10 E., Gila County, Hydrologic Unit 15060105, in Tonto National Forest, on right bank, 0.5 mi upstream from mouth, 0.8 mi downstream from bridge on county road, and 4.8 mi south of Gisela.

DRAINAGE AREA.--122 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-22-63	10,000	ES,HP
1966	12-22-65	[1]8,130	
1967	08-09-67	5,290	
1968	12-19-67	2,520	
1969	07-25-69	2,080	
1970	09-05-70	[2]44,400	
1971	08-19-71	810	
1972	09-02-72	1,350	
1973	10-07-72	4,250	
1974	07-07-74	1,450	
1975	07-08-75	1,020	
1976	02-09-76	2,700	
1977	08-15-77	3,020	
1978	03-02-78	8,220	
1979	01-17-79	5,230	
1980	02-19-80	4,550	
1981	08-01-81	1,530	
1982	08-11-82	5,220	
1983	09-30-83	4,280	
1984	09-10-84	1,710	
1985	12-27-84	2,300	

[1]Highest since 1963.
[2]Highest since 1952.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
91.4	15.6	4,390	21.0	3.0	24.2	2.8	5.0

09498870 RYE CREEK NEAR GISELA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1967-85

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	89	0.74	10	21	2.0	3.2
NOVEMBER	71	0.69	11	21	1.9	3.4
DECEMBER	171	0.71	36	55	1.5	11.3
JANUARY	222	1.0	41	61	1.5	12.7
FEBRUARY	495	1.0	80	121	1.5	24.7
MARCH	608	1.2	90	148	1.7	27.9
APRIL	94	1.3	22	27	1.2	6.9
MAY	18	0.99	6.3	5.3	0.84	2.0
JUNE	6.5	0.81	3.2	1.8	0.56	1.0
JULY	12	0.63	4.5	2.7	0.60	1.4
AUGUST	22	1.0	7.1	5.6	0.78	2.2
SEPTEMBER	97	1.1	11	22	2.1	3.3
ANNUAL	77	1.6	27	27	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.96	0.53	0.37	0.27	0.18	0.14
3	0.98	0.56	0.41	0.31	0.22	0.18
7	1.0	0.62	0.47	0.38	0.29	0.24
14	1.1	0.72	0.57	0.48	0.38	0.33
30	1.2	0.82	0.66	0.55	0.45	0.40
60	1.5	1.0	0.82	0.70	0.58	0.51
90	1.7	1.2	0.97	0.81	0.66	0.57
120	2.1	1.3	1.1	0.89	0.72	0.63
183	2.8	1.8	1.5	1.3	1.1	1.0

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963, 1966-85

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
2,850	6,100	9,700	16,800	24,600	35,400

WEIGHTED SKEW (LOGS)= 0.79
MEAN (LOGS)= 3.50
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-85

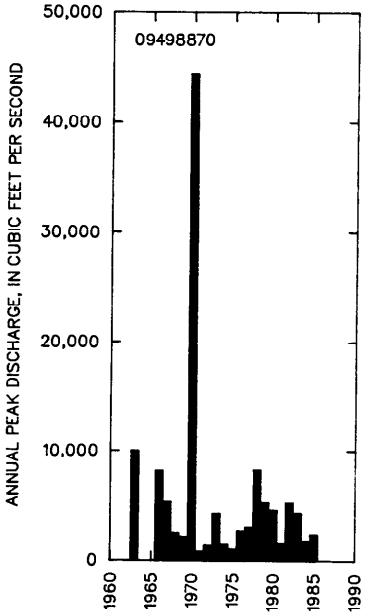
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	534	1,620	2,790	4,890	6,940	9,420
3	289	967	1,730	3,110	4,460	6,090
7	169	616	1,140	2,110	3,070	4,230
15	101	376	706	1,330	1,950	2,720
30	66	240	441	806	1,160	1,590
60	46	170	318	596	874	1,220
90	36	132	247	467	690	968

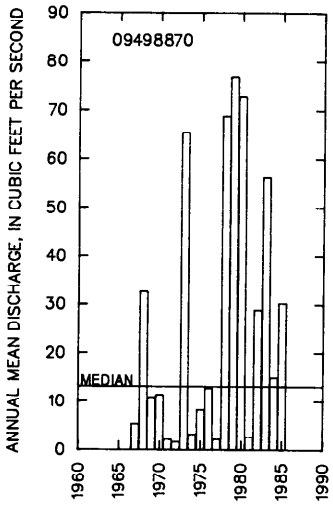
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-85

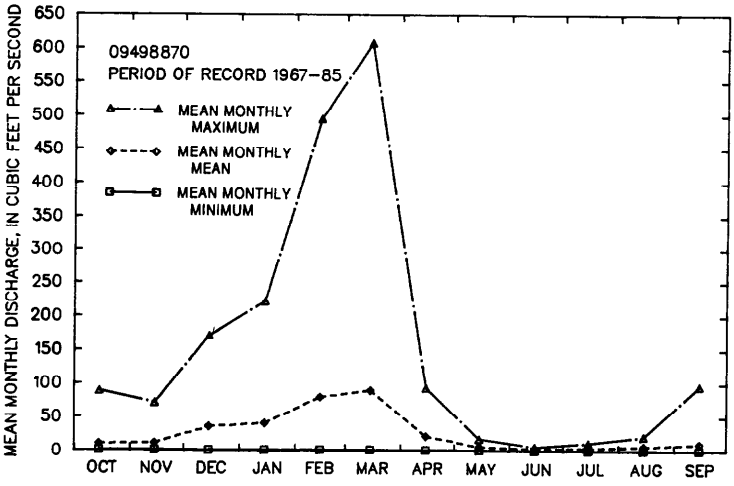
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
422	111	49	22	11	5.0	3.6	2.7	2.1	1.8	1.5	1.1	0.82	0.60	0.54	0.51	0.36

† Reliability of values in column is uncertain, and potential errors are large.

09498870 RYE CREEK NEAR GISELA, AZ--CONTINUED







09498900 GOLD CREEK NEAR PAYSON, AZ

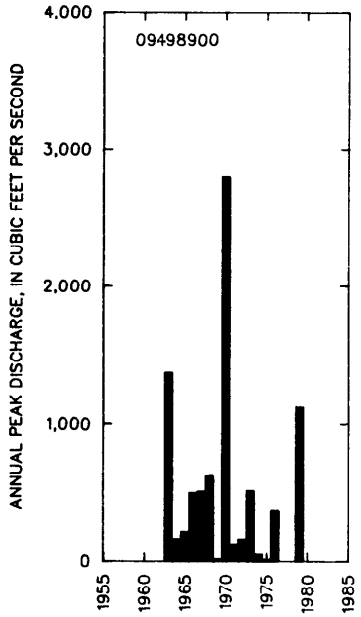
LOCATION.--Lat 34°00'10", long 111°21'30", in SW¼ sec.29, T.8 N., R.10 E., Gila County, Hydrologic Unit 15060105, at State Highway 87, 16 mi south of Payson.

DRAINAGE AREA.--6.44 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-22-63	1,370	
1964	07-15-64	163	
1965	01-07-65	215	
1966	12-22-65	500	
1967	08-05-67	510	
1968	12-19-67	620	
1969	00-00-69	15	LT
1970	09-05-70	2,800	
1971	08-19-71	125	
1972	06-22-72	160	
1973	10-06-72	515	
1974	01-08-74	50	ES
1975	10-29-74	12	
1976	02-09-76	375	
1979	12-18-78	[1]1,120	HP

[1]Highest since 1970.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
314	795	1,290	2,160	3,020	4,070

WEIGHTED SKEW (LOGS)= -0.01
MEAN (LOGS)= 2.50
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
295	4.4	4,590	6.5	3.0	21.0	2.9	5.5

09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ

LOCATION.--Lat 33°58'48", long 111°18'10", in SW¼NE¼ sec.2, T.7 N., R.10 E., Gila County, Hydrologic Unit 15060105, in Tonto National Forest, on left bank 600 ft upstream from Gun Creek, 17 mi upstream from high-water line of Roosevelt Lake, and 24 mi northwest of Roosevelt.

DRAINAGE AREA.--675 mi^2.

REMARKS.--Small diversions above station for irrigation.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1941	03-14-41	32,000		1966	12-22-65	44,700	
1942	12-11-41	1,250		1967	12-07-66	7,550	
1943	03-05-43	15,800		1968	12-19-67	19,700	
1944	02-24-44	2,990		1969	01-26-69	10,600	
1945	08-11-45	5,320		1970	09-05-70	53,000	
1946	09-18-46	10,200		1971	09-09-71	5,280	
1947	12-28-46	7,130		1972	12-26-71	2,600	
1948	07-26-48	3,240		1973	10-19-72	39,800	
1949	01-13-49	9,890		1974	08-06-74	3,800	
1950	07-16-50	5,500		1975	10-29-74	2,020	
1951	08-28-51	31,100		1976	02-09-76	34,900	
1952	01-18-52	45,400		1977	08-15-77	2,820	
1953	07-30-53	2,620		1978	03-02-78	57,200	
1954	03-23-54	8,100		1979	12-18-78	38,700	
1955	08-06-55	15,200		1980	02-15-80	[1]61,400	
1956	07-18-56	2,330		1981	08-08-81	4,420	
1957	01-09-57	15,000		1982	02-11-82	18,000	ES
1958	03-22-58	10,600		1983	11-30-82	32,800	
1959	08-19-59	11,100		1984	10-01-83	24,400	
1960	12-26-59	25,200		1985	12-27-84	43,300	
1961	09-08-61	12,900		1986	11-30-85	10,900	
1962	09-06-62	3,000		1987	08-03-87	4,460	
1963	08-22-63	19,700		1988	02-03-88	23,900	
1964	07-30-64	12,000		1989	02-05-89	6,950	
1965	01-07-65	12,900					

[1]Highest since 1708, O'Conner and others.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
88.4	48.3	5,020	65.0	3.0	23.9	2.8	5.4

09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1942-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,050	1.5	68	171	2.5	3.7
NOVEMBER	438	6.5	75	115	1.5	4.0
DECEMBER	2,330	9.9	266	507	1.9	14.4
JANUARY	1,520	18	285	399	1.4	15.4
FEBRUARY	4,190	13	338	653	1.9	18.3
MARCH	4,160	12	444	697	1.6	24.0
APRIL	709	9.0	148	176	1.2	8.0
MAY	285	4.4	41	49	1.2	2.2
JUNE	95	0.33	13	16	1.2	0.7
JULY	207	0.35	23	30	1.3	1.2
AUGUST	1,090	4.5	100	195	2.0	5.4
SEPTEMBER	626	0.78	47	104	2.2	2.6
ANNUAL	595	22	154	151	0.99	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1942-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	6.9	2.9	1.7	1.0	0.59	0.39
90	11	6.2	4.6	3.6	2.7	2.2
120	14	9.3	7.3	6.0	4.8	4.1
183	21	13	11	10	9.0	8.5

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1941-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
11,200	25,700	39,000	60,100	79,100	101,000

WEIGHTED SKEW (LOGS)= -0.16
MEAN (LOGS)= 4.04
STANDARD DEV. (LOGS)= 0.44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1942-89

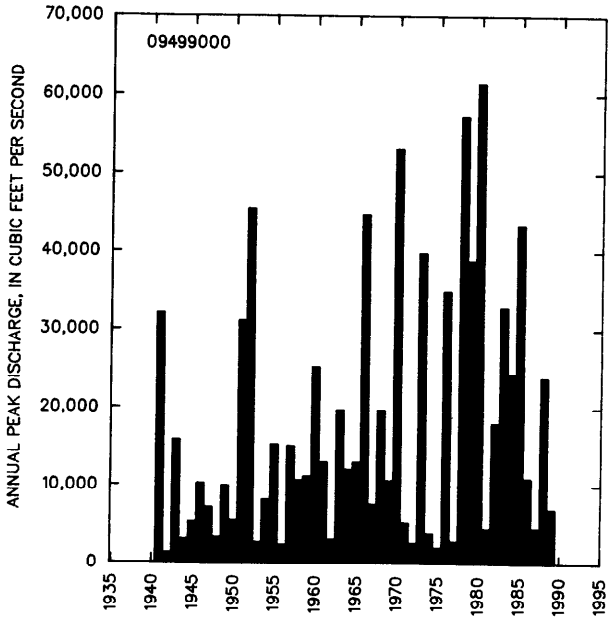
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	3,960	10,800	17,800	29,600	40,600	53,500
3	2,360	6,220	10,100	16,800	23,000	30,500
7	1,390	3,420	5,370	8,570	11,500	15,000
15	844	1,970	3,010	4,680	6,180	7,890
30	568	1,330	2,060	3,220	4,280	5,510
60	371	884	1,380	2,210	2,980	3,890
90	284	678	1,060	1,710	2,330	3,060

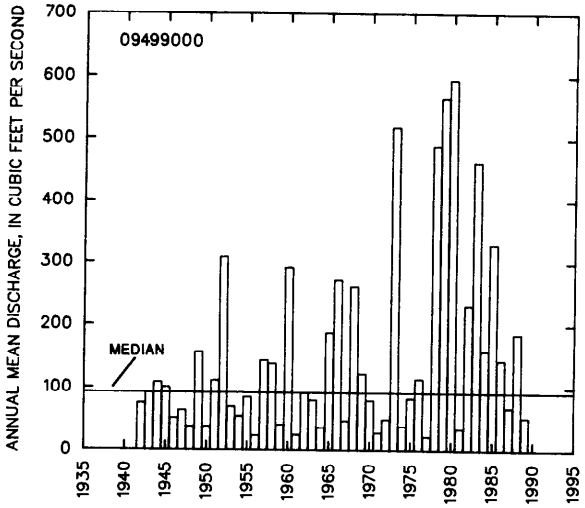
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-89

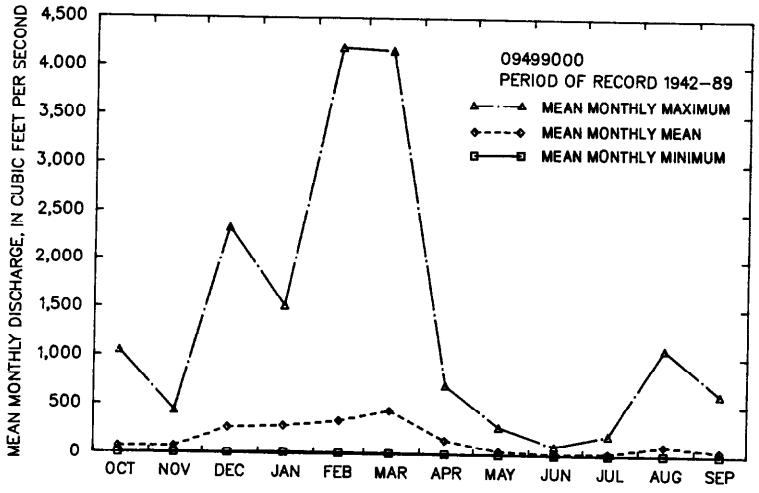
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,450	565	252	147	97	48	31	24	18	14	9.0	4.5	1.9	0.18	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ--CONTINUED







09501300 TORTILLA CREEK AT TORTILLA FLAT, AZ

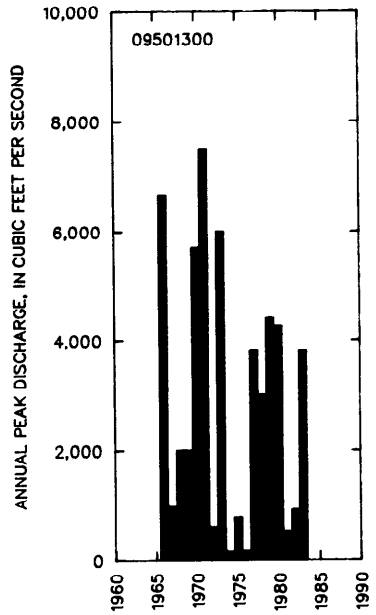
LOCATION.--Lat 33°31'38", long 111°23'13", in NW¼ sec.13, T.2 N., R.9 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060106, 600 ft upstream from State Highway 88 and Tortilla Flat Store, and 3.7 mi southeast of Mormon Flat Dam.

DRAINAGE AREA.--24.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	09-13-66	[1]6,660	
1967	08-18-67	975	
1968	12-19-67	2,000	
1969	11-00-68	2,000	LT
1970	09-05-70	5,700	
1971	09-01-71	[1]7,500	
1972	08-00-72	600	
1973	10-19-72	6,000	
1974	01-08-74	150	
1975	10-29-74	775	
1976	09-25-76	160	
1977	08-16-77	3,800	
1978	03-02-78	3,000	
1979	12-18-78	4,400	
1980	02-15-80	4,250	
1981	07-28-81	520	
1982	03-13-82	910	
1983	09-30-83	3,800	

[1]Highest since 1941.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-83

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,960	4,290	6,250	9,090	11,400	13,900

WEIGHTED SKEW (LOGS)= -0.39
MEAN (LOGS)= 3.26
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
179	13.1	2,690	1.0	1.0	15.0	2.3	4.5

09502700 CROOKTON WASH NEAR SELIGMAN, AZ

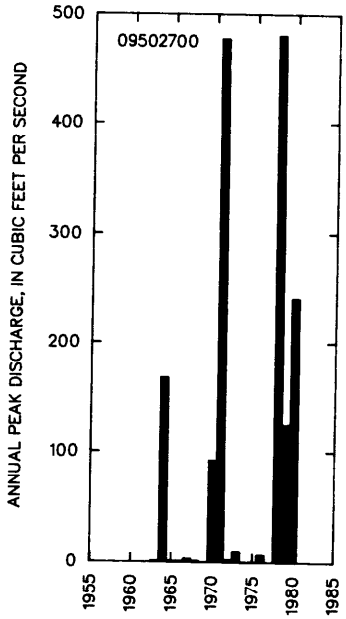
LOCATION.--Lat 35°17'15", long 112°43'55", in SE¼ sec.17, T.22 N., R.4 W., Yavapai County, Hydrologic Unit 15060201, at U.S. Highway 66, 9 mi east of Seligman, and 15 mi west of Ashfork.

DRAINAGE AREA.--6.01 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	1.0	LT
1964	08-01-64	168	
1965	00-00-65	1.0	LT
1966	00-00-66	1.0	LT
1967	09-00-67	3.0	LT
1968	00-00-68	1.0	LT
1969	00-00-69	0	
1970	09-05-70	92	
1971	08-18-71	477	
1972	00-00-72	2.0	ES
1973	00-00-73	10	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	6.5	
1978	03-01-78	[1]480	
1979	12-18-78	125	
1980	02-19-80	240	

[1]Highest since 1964.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1978-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
7.2	86.2	310	1,200	2,870	6,250

WEIGHTED SKEW (LOGS)=	-0.05
MEAN (LOGS)=	0.85
STANDARD DEV. (LOGS)=	1.29

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
111	4.8	5,970	27.0	3.0	15.5	1.7	3.5

09502800 WILLIAMSON VALLEY WASH NEAR PAULDEN, AZ

LOCATION.--Lat 34°52'00", long 112°36'45", in SE¼SE¼ sec.7, T.17 N., R.3 W., Yavapai County, Hydrologic Unit 15060201, on left bank 3.6 mi north of Simmons and 8.5 mi west of Paulden.

DRAINAGE AREA.--255 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1965	04-10-65	820
1966	12-30-65	3,630
1967	12-07-66	1,710
1968	01-28-68	2,120
1969	02-26-69	400
1970	08-19-70	445
1971	08-23-71	465
1972	08-12-72	254
1973	10-19-72	1,940
1974	09-27-74	570
1975	11-02-74	112
1976	02-09-76	3,910
1977	09-12-77	1,300
1978	03-01-78	7,490
1979	12-18-78	4,890
1980	02-20-80	10,100
1981	08-08-81	137
1982	02-11-82	572
1983	09-23-83	14,800
1984	10-05-83	1,280
1985	12-27-84	2,780

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
48.6	19.2	5,120	42.0	2.0	17.3	2.1	4.0

09502800 WILLIAMSON VALLEY WASH NEAR PAULDEN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-85

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	77	0.00	6.7	18	2.7	3.5
NOVEMBER	28	0.49	5.0	6.9	1.4	2.6
DECEMBER	185	0.93	26	49	1.9	13.8
JANUARY	175	1.8	21	41	2.0	10.9
FEBRUARY	513	1.6	58	116	2.0	30.4
MARCH	381	1.3	48	94	2.0	25.2
APRIL	40	0.99	5.6	9.7	1.7	3.0
MAY	3.7	0.00	1.5	0.99	0.66	0.8
JUNE	2.1	0.00	0.66	0.68	1.0	0.3
JULY	3.7	0.02	0.88	0.92	1.0	0.5
AUGUST	15	0.32	3.4	4.7	1.4	1.8
SEPTEMBER	233	0.03	14	52	3.8	7.2
ANNUAL	63	1.6	16	18	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.15	0.00	0.00	0.00	0.00	0.00
60	0.33	0.04	0.00	0.00	0.00	0.00
90	0.56	0.20	0.09	0.00	0.00	0.00
120	0.73	0.34	0.22	0.14	0.08	0.06
183	1.3	0.52	0.31	0.20	0.12	0.08

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-85

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,310	4,080	7,360	13,700	20,400	29,200

WEIGHTED SKEW (LOGS)= -0.05
MEAN (LOGS)= 3.11
STANDARD DEV. (LOGS)= 0.59

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-85

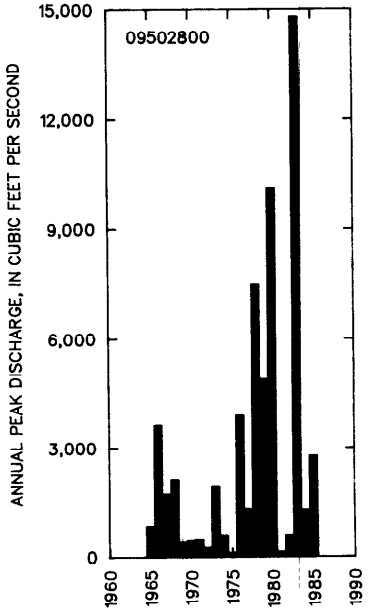
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	487	1,950	3,690	6,870	9,950	13,600
3	251	1,020	1,950	3,680	5,360	7,370
7	130	538	1,070	2,160	3,320	4,810
15	73	293	580	1,170	1,800	2,630
30	44	171	341	696	1,090	1,640
60	28	102	200	409	650	986
90	20	71	137	279	446	681

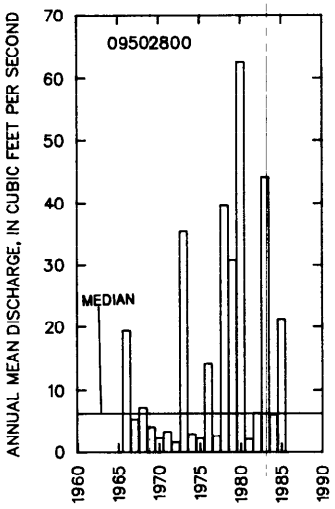
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-85

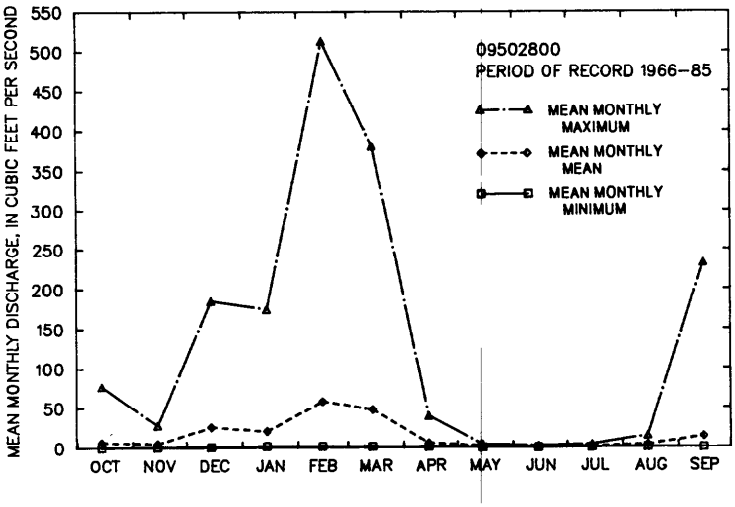
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
257	34	7.7	4.9	4.0	3.0	2.3	1.9	1.5	1.0	0.54	0.13	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09502800 WILLIAMSON VALLEY WASH NEAR PAULDEN, AZ--CONTINUED







09503000 GRANITE CREEK NEAR PRESCOTT, AZ

LOCATION.--Lat 34°34′, long 112°27′, in SW¼ sec.26, T.14 N., R.2 W. (unsurveyed), Yavapai County, Hydrologic Unit 15060202, at bridge on the U.S. Highway 89, 2 mi north of Prescott and 4.5 mi upstream from Willow Creek.

DRAINAGE AREA.--36.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1933	09-07-33	230	
1934	08-30-34	450	
1935	08-30-35	600	
1936	09-11-36	500	
1937	02-07-37	2,900	
1938	03-03-38	2,400	
1939	08-04-39	638	
1940	09-29-40	83	
1941	03-01-41	1,530	
1942	08-17-42	1,110	
1943	08-28-43	1,780	
1944	03-14-44	297	
1945	08-10-45	2,200	
1946	07-20-46	899	
1947	07-21-47	251	
1963	08-19-63	[1]6,660	HP
1966	12-00-65	1,500	HP

[1]Highest since 1932.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
104	7.3	5,900	73.0	1.0	22.1	2.2	4.5

09503000 GRANITE CREEK NEAR PRESCOTT, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1933-47

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	7.3	0.00	0.71	1.9	2.7	1.1
NOVEMBER	2.8	0.00	0.44	0.91	2.1	0.7
DECEMBER	33	0.00	3.2	8.4	2.6	4.8
JANUARY	35	0.00	3.8	9.0	2.4	5.7
FEBRUARY	159	0.00	19	41	2.1	28.8
MARCH	79	0.00	25	31	1.2	37.7
APRIL	67	0.00	8.4	17	2.0	12.6
MAY	7.0	0.00	0.90	1.8	2.0	1.3
JUNE	1.2	0.00	0.19	0.33	1.7	0.3
JULY	2.4	0.00	0.76	0.77	1.0	1.1
AUGUST	8.3	0.00	2.7	2.7	0.97	4.0
SEPTEMBER	12	0.00	1.3	3.0	2.2	2.0
ANNUAL	24	0.37	5.5	7.0	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1934-47

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.02	0.00	0.00	0.00	0.00	0.00
120	0.08	0.00	0.00	0.00	0.00	0.00
183	0.58	0.16	0.05	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1933-47, 1963, 1966

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
841	1,850	2,790	4,300	5,690	7,310

WEIGHTED SKEW (LOGS)= -0.03
MEAN (LOGS)= 2.92
STANDARD DEV. (LOGS)= 0.41

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1933-47

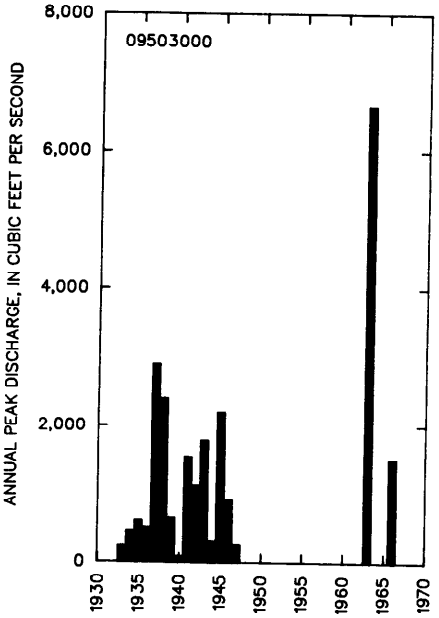
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	103	328	660	1,490	2,640	4,540
3	62	193	372	783	1,300	2,090
7	42	118	214	415	650	987
15	27	80	148	299	484	757
30	18	52	96	192	308	477
60	11	33	62	127	207	327
90	8.3	25	46	92	150	235

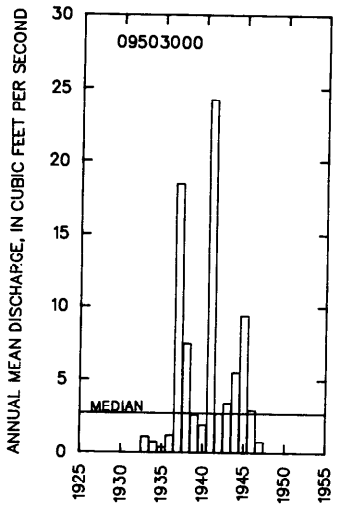
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-47

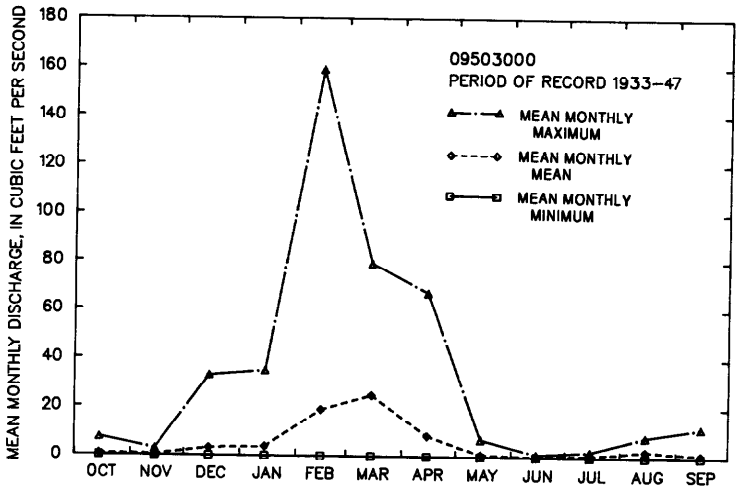
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
92	24	8.9	4.5	2.2	0.70	0.23	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09503000 GRANITE CREEK NEAR PRESCOTT, AZ--CONTINUED







09503700 VERDE RIVER NEAR PAULDEN, AZ

LOCATION.--Lat 34°53'40", long 112°20'32", in SW¼SE¼ sec.39, T.18 N., R.1 W. (revised), Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on right bank 0.3 mi upstream from Verde Valley Ranch, 7 mi east of Paulden, 8 mi upstream from Hell Canyon, 8 mi downstream from Granite Creek, and 10 mi downstream from Sullivan Lake.

DRAINAGE AREA.--2,507 mi^2, (includes 357 mi^2 in Aubrey Valley Playa, a closed basin).

REMARKS.--Diversions and storage above station for irrigation and municipal use.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-25-63	710	1977	09-12-77	1,290
1964	08-05-64	1,270	1978	03-01-78	8,080
1965	04-10-65	685	1979	12-19-78	5,700
1966	12-30-65	6,130	1980	02-20-80	15,700
1967	12-07-66	1,250	1981	08-09-81	195
1968	01-28-68	1,800	1982	03-16-82	541
1969	07-26-69	465	1983	09-24-83	15,600
1970	08-19-70	705	1984	09-01-84	3,650
1971	08-13-71	2,270	1985	12-28-84	2,390
1972	08-08-72	1,620	1986	11-30-85	1,460
1973	10-20-72	3,040	1987	08-12-87	217
1974	09-05-74	270	1988	04-26-88	342
1975	07-09-75	73	1989	07-08-89	263
1976	02-09-76	4,340			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
23.8	78.4	5,410	60.0	2.8	16.3	1.9	3.8

09503700 VERDE RIVER NEAR PAULDEN, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1964-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	200	19	33	37	1.1	6.6
NOVEMBER	44	20	27	5.7	0.21	5.4
DECEMBER	295	22	48	64	1.3	9.5
JANUARY	232	22	40	44	1.1	8.0
FEBRUARY	1,310	20	92	251	2.7	18.3
MARCH	669	19	79	141	1.8	15.8
APRIL	155	21	35	28	0.82	6.9
MAY	31	16	25	2.9	0.12	4.9
JUNE	27	20	24	2.0	0.09	4.8
JULY	35	21	26	3.3	0.13	5.1
AUGUST	81	23	31	13	0.42	6.3
SEPTEMBER	440	20	42	81	2.0	8.3
ANNUAL	147	24	42	28	0.68	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	22	19	18	17	15	14
3	22	19	18	17	16	15
7	22	20	18	17	16	15
14	22	20	19	17	16	15
30	22	20	19	18	17	16
60	23	21	20	19	18	18
90	23	22	21	20	19	19
120	24	22	21	21	20	20
183	24	23	23	22	22	22

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1,330	4,050	7,310	13,800	20,800	30,300

WEIGHTED SKEW (LOGS)= 0.06
MEAN (LOGS)= 3.13
STANDARD DEV. (LOGS)= 0.57

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-89

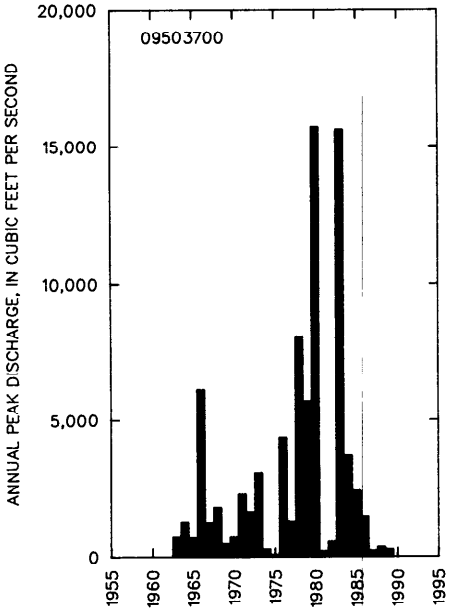
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	488	1,770	3,540	7,560	12,500	19,700
3	309	1,110	2,230	4,870	8,180	13,200
7	181	601	1,210	2,680	4,630	7,720
15	114	346	677	1,490	2,570	4,330
30	78	211	395	843	1,450	2,430
60	56	131	228	450	733	1,180
90	47	100	165	307	481	747

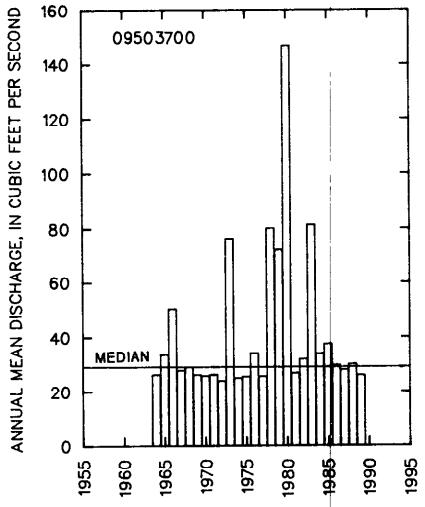
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-89

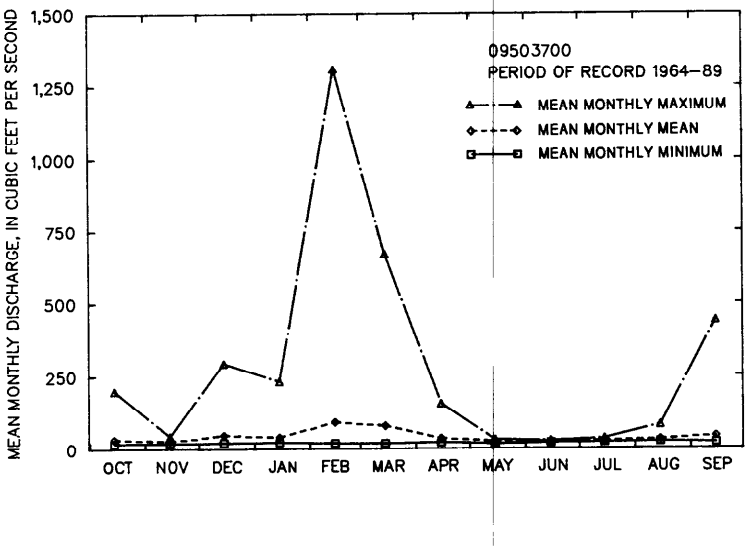
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
366	45	31	31	30	28	26	25	24	24	23	22	20	19	18	18	16

† Reliability of values in column is uncertain, and potential errors are large.

09503700 VERDE RIVER NEAR PAULDEN, AZ--CONTINUED







09503720 HELL CANYON NEAR WILLIAMS, AZ

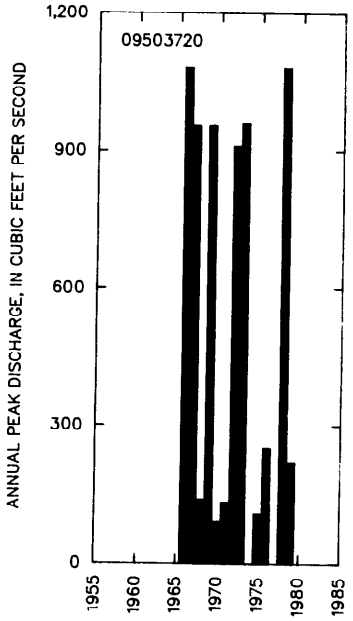
LOCATION.--Lat 35°09'37", long 112°12'35", in NW¼NW¼ sec.32, T.21 N., R.2 E., Coconino County, Hydrologic Unit 15060202, in Kaibab National Forest, on right bank 6 mi south of Williams.

DRAINAGE AREA.--14.9 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	11-25-65	1,080
1967	12-06-66	955
1968	02-24-68	139
1969	01-25-69	955
1970	03-15-70	91
1971	08-04-71	133
1972	12-26-71	910
1973	10-19-72	960
1974	00-00-74	0
1975	00-00-75	108
1976	00-00-76	250
1978	03-01-78	[1]1,080
1979	12-18-78	220

[1]Highest since 1966.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-76, 1978-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
346	862	1,360	2,190	2,960	3,860

WEIGHTED SKEW (LOGS)=	-0.18
MEAN (LOGS)=	2.53
STANDARD DEV. (LOGS)=	0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
47.8	5.3	7,110	88.0	3.0	24.1	2.3	4.2

09503740 HELL CANYON TRIBUTARY NEAR ASHFORK, AZ

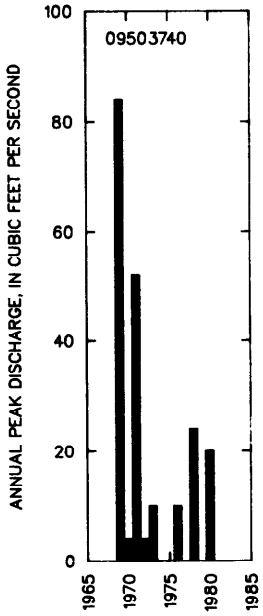
LOCATION.--Lat 35°05'02", long 112°24'28", in SW¼ sec.30, T.20 N., R.1 W., Yavapai County, Hydrologic Unit 15060202, 0.5 mi upstream from mouth, and 11 mi southeast of Ashfork.

DRAINAGE AREA.--0.75 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1969	00-00-69	84	
1970	09-04-70	4.0	
1971	00-00-71	52	
1972	04-00-72	4.0	
1973	10-19-72	10	
1974	00-00-74	0	
1975	00-00-75	0	
1976	02-09-76	10	
1978	03-01-78	[1]24	HP
1980	02-19-80	20	HP

[1]Highest since 1971.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-76, 1978, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
10.5	32.3	57.4	105	156	220

WEIGHTED SKEW (LOGS)=	-0.08
MEAN (LOGS)=	1.02
STANDARD DEV. (LOGS)=	0.58

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
78.4	1.7	5,180	91.0	3.0	17.2	1.7	3.8

09503750 LIMESTONE CANYON NEAR PAULDEN, AZ

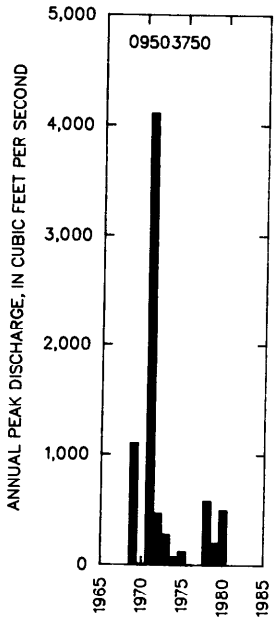
LOCATION.--Lat 34°58'48", long 112°24'05", in S½ sec.31, T.19 N., R.1 W., Yavapai County, Hydrologic Unit 15060202, 1.3 mi upstream from mouth, 1.5 mi west of drake, and 7.5 mi northeast of Paulden.

DRAINAGE AREA.--14.5 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1969	00-00-69	1,100	
1970	09-04-70	10	ES
1971	08-12-71	4,100	
1972	08-12-72	470	
1973	10-07-72	275	
1974	07-20-74	70	
1975	11-02-74	125	
1976	00-00-76	1.0	ES
1978	03-01-78	[1]580	
1979	12-18-78	200	
1980	02-14-80	500	

[1]Highest since 1971.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-76, 1978-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
239	1,020	2,080	4,270	6,670	9,820

WEIGHTED SKEW (LOGS)=	-0.30
MEAN (LOGS)=	2.34
STANDARD DEV. (LOGS)=	0.78

† Reliability of values in column is uncertain, and potential errors are large.

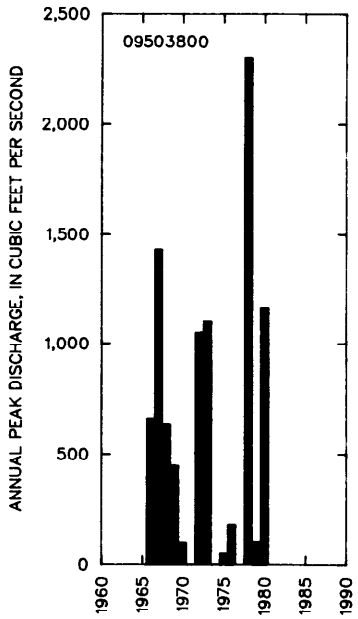
BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
87.3	8.4	5,310	100	3.0	15.5	1.8	3.8

09503800 VOLUNTEER WASH NEAR BELLEMONT, AZ

LOCATION.--Lat 35°09'02", long 111°53'54", in SE¼SE¼ sec.31, T.21 N., R.5 E., Coconino County, Hydrologic Unit 15060202, in Kaibab National Forest, in Navajo Army Depot military reservation, on right bank 7 mi southwest of Bellemont, and 14 mi west of Flagstaff.

DRAINAGE AREA.--131 mi^2, of which 6.93 mi^2 is noncontributing.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	03-12-66	660
1967	12-07-66	1,430
1968	02-24-68	632
1969	01-26-69	447
1970	04-04-70	96
1971	00-00-71	0
1972	12-26-71	1,050
1973	10-19-72	1,100
1974	00-00-74	0
1975	00-00-75	49
1976	00-00-76	180
1978	03-01-78	[1]2,300
1979	12-18-78	100
1980	02-19-80	1,160

[1]Highest since 1965.

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
357	1,160	2,040	3,610	5,110	6,890

WEIGHTED SKEW (LOGS)= -0.37
MEAN (LOGS)= 2.51
STANDARD DEV. (LOGS)= 0.65

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.6	20.0	7,620	76.0	3.0	25.7	2.3	4.2

09504000 VERDE RIVER NEAR CLARKDALE, AZ

LOCATION.--Lat 34°51'08", long 112°03'55", in NW¼SE¼ sec.17, T.17 N., R.3 E., Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on left bank 1.7 mi downstream from Sycamore Creek and 5.6 mi north of Clarkdale.

DRAINAGE AREA.--3,503 mi^2, of which 364 mi^2 is noncontributing, including 359 mi^2 in Aubrey Valley Playa, a closed basin.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	01-18-16	6,860	HP	1977	08-10-77	2,660	
1918	03-08-18	35,500	HP	1978	03-01-78	25,000	
1920	02-21-20	[1]50,600	HP	1979	12-18-78	19,900	
1966	12-10-65	12,900		1980	02-15-80	30,100	
1967	12-06-66	22,500		1981	09-23-81	1,150	
1968	01-28-68	1,630		1982	03-12-82	15,720	
1969	01-25-69	14,800		1983	09-24-83	14,400	
1970	09-06-70	717		1984	09-02-84	4,010	
1971	07-31-71	3,930		1985	12-28-84	4,760	
1972	12-26-71	7,540		1986	11-30-85	5,880	
1973	10-19-72	14,000		1987	03-08-87	1,620	
1974	09-26-74	3,960		1988	11-01-87	8,810	
1975	03-20-75	1,560		1989	10-14-88	461	
1976	02-09-76	18,000					

[1]Highest since 1906.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
22.9	115	5,490	73.0	2.9	19.1	2.0	4.0

MEAN MONTHLY AND ANNUAL DISCHARGES 1916, 1918-20, 1966-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	1,080	68	128	193	1.5	5.5
NOVEMBER	736	70	143	144	1.0	6.2
DECEMBER	1,030	75	229	282	1.2	9.9
JANUARY	578	73	154	142	0.92	6.7
FEBRUARY	3,490	74	444	756	1.7	19.2
MARCH	2,760	73	528	607	1.2	22.9
APRIL	1,520	69	197	281	1.4	8.5
MAY	355	69	91	52	0.58	3.9
JUNE	91	62	76	7.0	0.09	3.3
JULY	670	64	110	111	1.0	4.7
AUGUST	201	74	103	30	0.29	4.5
SEPTEMBER	670	66	109	111	1.0	4.7
ANNUAL	448	82	192	112	0.59	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1919-21, 1967-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	69	64	61	59	56	54
3	70	65	62	59	57	55
7	70	65	63	60	58	56
14	72	67	64	62	59	57
30	73	68	65	63	60	59
60	76	71	68	66	64	62
90	77	72	70	68	66	65
120						
183	80	76	76	76	76	76

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916, 1918, 1920, 1966-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
6,580	16,800	26,400	41,400	54,500	69,000

WEIGHTED SKEW (LOGS)= -0.38
MEAN (LOGS)= 3.78
STANDARD DEV. (LOGS)= 0.52

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1916, 1918-20, 1966-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	3,370	10,200	17,100	28,300	38,400	49,700
3	2,100	5,980	9,800	15,900	21,300	27,300
7	1,330	3,730	6,100	10,000	13,500	17,500
15	859	2,170	3,410	5,390	7,150	9,140
30	583	1,370	2,110	3,280	4,320	5,520
60	399	882	1,330	2,040	2,690	3,450
90	323	668	975	1,460	1,890	2,390

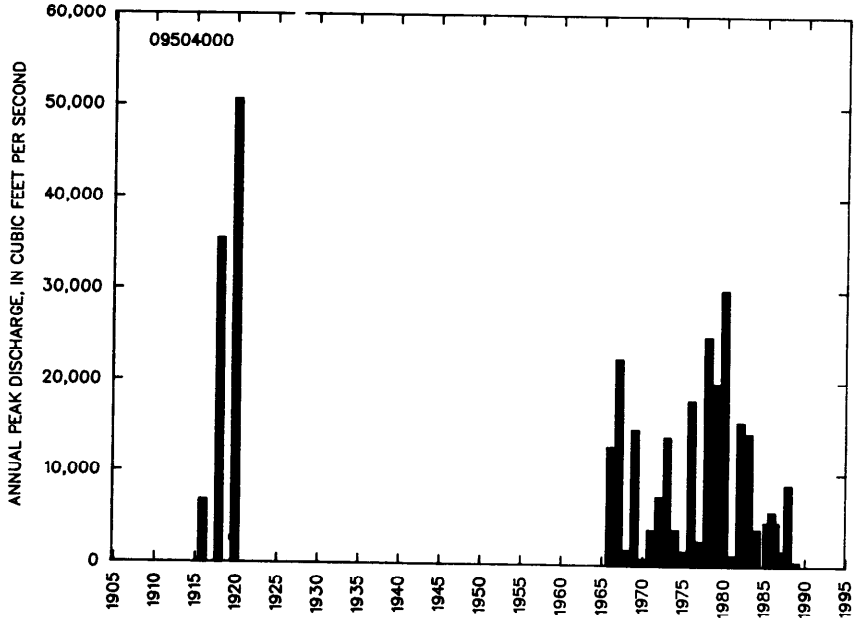
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1916, 1918-20, 1966-89

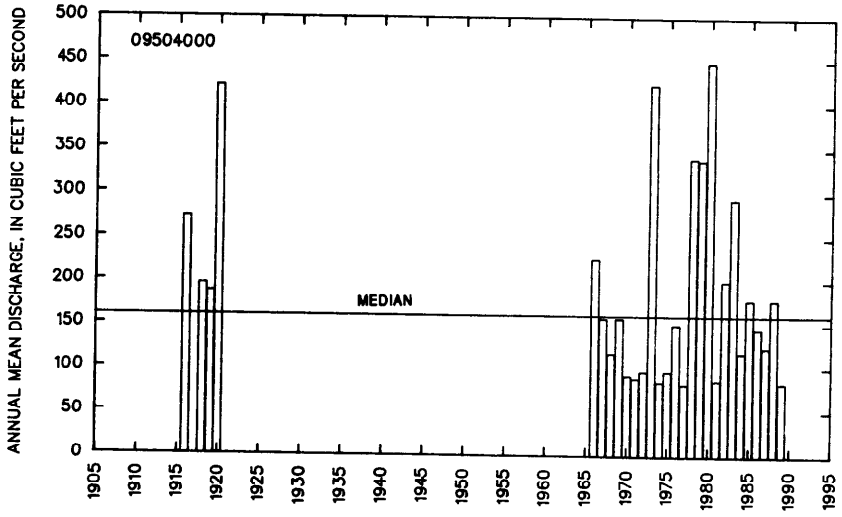
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

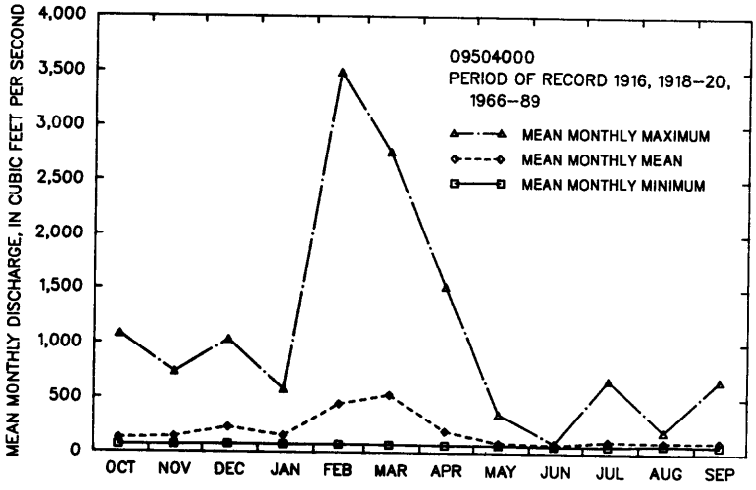
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,060	593	236	131	104	91	88	85	82	79	75	70	68	66	62	59	56

† Reliability of values in column is uncertain, and potential errors are large.

09504000 VERDE RIVER NEAR CLARKDALE, AZ--CONTINUED







09504100 HULL CANYON NEAR JEROME, AZ

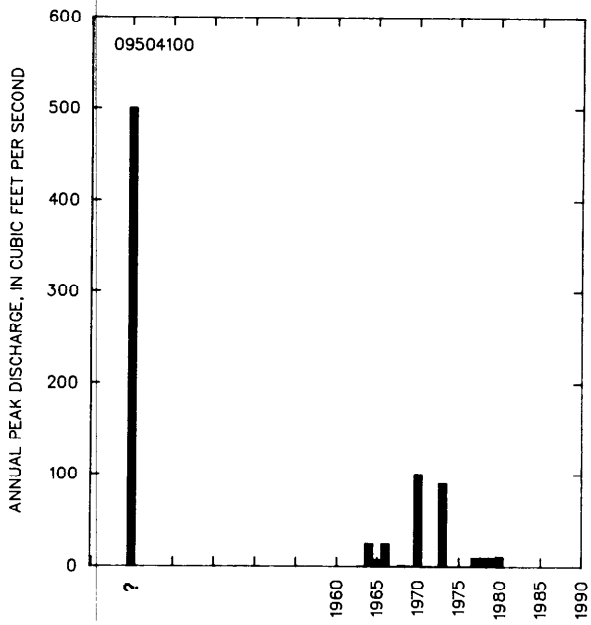
LOCATION.--Lat 34°44'20", long 112°08'35", in NW¼ sec.28, T.16 N., R.2 E., Yavapai County, Hydrologic unit 15060202, at U.S. Highway ALt. 89, 2 mi west of Jerome.

DRAINAGE AREA.--0.85 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
----	--------	[1]500	ES,HP
1963	00-00-63	0	
1964	08-10-64	25	ES
1965	04-19-65	7.0	ES
1966	09-14-66	25	ES
1967	00-00-67	0	
1968	02-14-68	1.0	
1969	07-27-69	0.5	ES
1970	09-05-70	100	ES
1971	00-00-71	0	
1972	00-00-72	0	
1973	10-07-72	90	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	0	
1977	00-00-77	9.0	LT
1978	00-00-78	9.0	LT
1979	00-00-79	9.0	LT
1980	02-00-80	10	

[1]Highest since 1935, year of occurrence unknown.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1935, 1963-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
2.6	23.5	66.3	183	335	561

WEIGHTED SKEW (LOGS)= -0.49
MEAN (LOGS)= 0.31
STANDARD DEV. (LOGS)= 1.24

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
1,270	1.6	7,050	97.0	3.0	22.0	2.3	4.2

09504400 MUNDS CANYON TRIBUTARY NEAR SEDONA, AZ

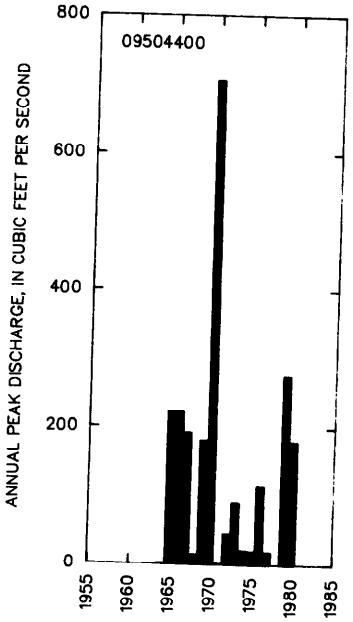
LOCATION.--Lat 34°55'20", long 111°38'40", in SW¼ sec.22, T.18 N., R.7 E., Coconino County, Hydrologic Unit 15060202, at State Highway 79, 7 mi northeast of Sedona.

DRAINAGE AREA.--1.15 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	07-00-64	1.0	ES
1965	09-03-65	222	
1966	11-25-65	222	
1967	12-06-66	192	
1968	02-00-68	14	
1969	01-25-69	181	
1970	09-05-70	705	
1971	00-00-71	1.0	LT
1972	06-05-72	44	
1973	10-07-72	90	
1974	04-02-74	20	
1975	04-00-75	19	
1976	00-00-76	114	
1977	00-00-77	18	
1979	12-18-78	[1]275	
1980	02-00-80	180	

[1]Highest since 1970.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-77, 1979-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
73.9	232	409	729	1,040	1,430

WEIGHTED SKEW (LOGS)= -0.26
MEAN (LOGS)= 1.84
STANDARD DEV. (LOGS)= 0.61

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
269	2.2	6,880	98.0	3.0	26.0	2.8	5.5

09504500 OAK CREEK NEAR CORNVILLE, AZ

LOCATION.--Lat 34°45'52", long 111°33'25", in NW¼SW¼ sec.23, T.16 N., R.4 E., Yavapai County, Hydrologic Unit 15060202, on right bank 250 ft downstream from county highway bridge, 0.2 mi upstream from Page Springs, 4 mi northeast of Cornville, and 15 mi upstream from mouth. Prior to March 18, 1981, at site 250 ft upstream.

DRAINAGE AREA.--355 mi^2.

REMARKS.--Numerous diversions above and below station for irrigation.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1938	03-03-38	([1])	HP	1966	11-25-65	17,600	
1941	03-14-41	5,280		1967	12-06-66	19,200	
1942	10-13-41	2,580		1968	02-26-68	816	
1943	03-10-43	3,640		1969	01-25-69	15,800	
1944	04-06-44	2,180		1970	09-05-70	[2]24,700	
1945	07-30-45	6,020		1971	08-27-71	4,050	
1946	00-00-46	1,200		1972	12-26-71	4,020	
1948	07-26-48	605		1973	10-19-72	8,790	
1949	09-09-49	2,260		1974	07-07-74	3,220	
1950	10-19-49	6,400		1975	07-14-75	4,820	
1951	08-29-51	3,440		1976	02-09-76	12,500	
1952	12-30-51	17,200		1977	07-18-77	415	
1953	07-14-53	858		1978	03-01-78	17,400	
1954	03-23-54	7,850		1979	12-19-78	[2]25,100	
1955	08-23-55	6,400		1980	02-19-80	26,400	
1956	08-17-56	675		1981	08-12-81	830	
1957	01-10-57	5,150		1982	03-12-82	13,000	
1958	11-03-57	9,620		1983	11-30-82	14,100	
1959	08-05-59	3,750		1984	12-27-83	5,730	
1960	12-25-59	4,340		1985	12-27-84	3,070	
1961	07-31-61	4,340		1986	11-30-85	6,480	
1962	02-12-62	7,280		1987	10-11-86	3,300	
1963	08-17-63	990		1988	11-01-87	7,640	
1964	08-14-64	10,300		1989	07-09-89	1,470	
1965	04-04-65	3,090					

[1]Highest since 1885; discharge unknown.
[2]Highest since 1938.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
85.0	40.8	6,200	66.0	2.7	22.6	2.4	4.7

GILA RIVER BASIN

09504500 OAK CREEK NEAR CORNVILLE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-45, 1949-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	571	20	51	83	1.6	4.8
NOVEMBER	450	29	69	86	1.2	6.5
DECEMBER	881	31	122	184	1.5	11.4
JANUARY	529	34	82	94	1.2	7.6
FEBRUARY	1,390	32	166	230	1.4	15.5
MARCH	1,320	29	246	244	0.99	23.0
APRIL	1,100	26	178	215	1.2	16.7
MAY	216	17	34	30	0.87	3.2
JUNE	58	14	21	7.0	0.34	1.9
JULY	41	14	25	7.6	0.31	2.3
AUGUST	91	13	35	15	0.44	3.3
SEPTEMBER	373	15	42	54	1.3	3.9
ANNUAL	240	30	89	54	0.60	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1942-45, 1950-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	14	12	11	9.8	8.8	8.2
3	15	12	11	10	9.2	8.5
7	15	13	12	11	10	9.8
14	16	14	13	12	11	11
30	17	15	14	13	13	12
60	19	17	16	15	14	14
90	21	19	17	16	15	14
120	24	21	20	19	17	17
183	28	24	22	21	20	19

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1941-46, 1948-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
4,890	11,500	17,500	26,800	34,800	43,700

WEIGHTED SKEW (LOGS)= -0.31
MEAN (LOGS)= 3.66
STANDARD DEV. (LOGS)= 0.46

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-45, 1949-89

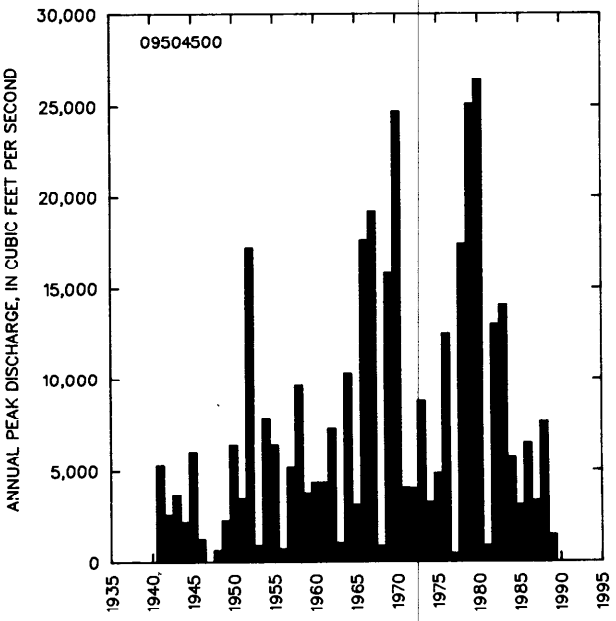
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,700	4,830	8,050	13,500	18,700	24,700
3	1,100	2,880	4,510	7,000	9,120	11,400
7	708	1,710	2,560	3,790	4,780	5,820
15	463	1,020	1,460	2,050	2,510	2,970
30	317	673	952	1,330	1,630	1,930
60	214	445	635	907	1,130	1,360
90	171	342	481	682	847	1,020

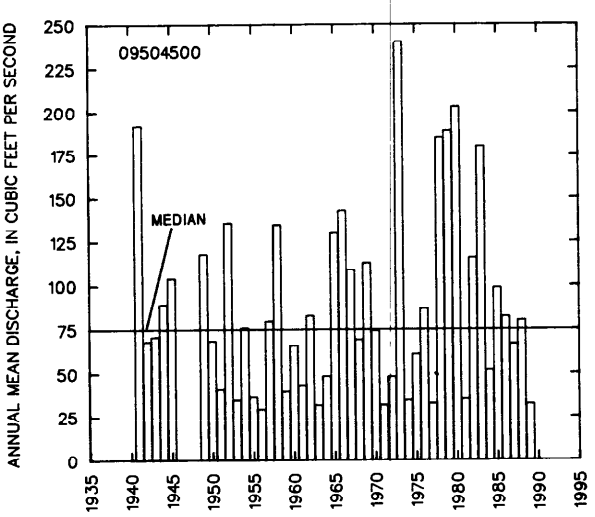
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-45, 1949-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,060	335	146	81	56	42	36	33	29	25	22	19	17	15	14	13	10

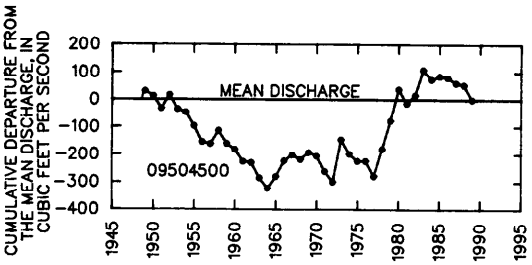
† Reliability of values in column is uncertain, and potential errors are large.

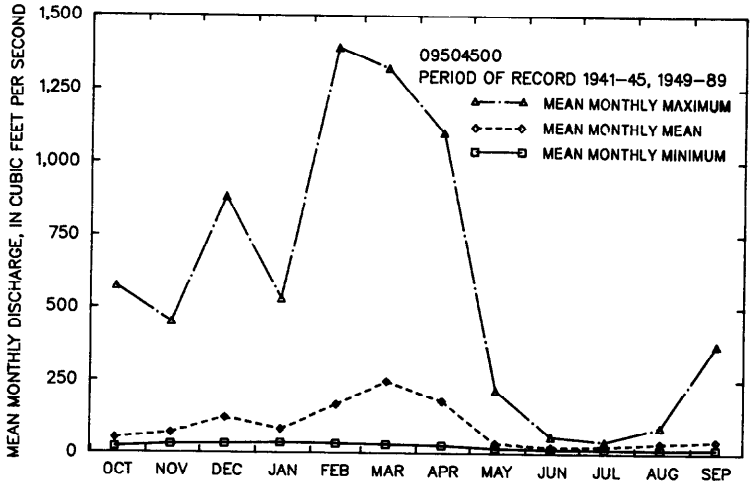
09504500 OAK CREEK NEAR CORNVILLE, AZ--CONTINUED





09504500 OAK CREEK NEAR CORNVILLE, AZ--CONTINUED





09504800 OAK CREEK TRIBUTARY NEAR CORNVILLE, AZ

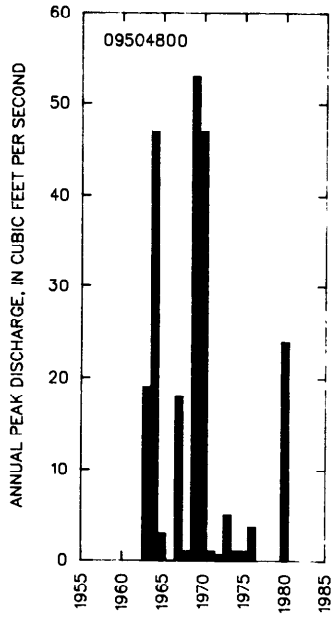
LOCATION.--Lat 34°42'45", long 111°52'50", in NW¼ sec.12, T.15 N., R.4 E., Yavapai County, Hydrologic Unit 15060202, at county road, 2.5 mi east of Cornville.

DRAINAGE AREA.--0.048 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-09-63	19	
1964	07-26-64	47	
1965	08-00-65	3.0	ES
1966	00-00-66	0	
1967	08-00-67	18	
1968	00-00-68	1.0	LT
1969	08-08-69	53	
1970	09-05-70	47	
1971	09-29-71	1.0	LT
1972	00-00-72	0.6	LT
1973	10-07-72	5.0	
1974	08-00-74	1.0	LT
1975	11-02-74	1.0	ES
1976	00-00-76	3.7	
1980	02-14-80	[1]24	HP

[1]Highest since 1970.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
4.1	25.9	61.7	144	240	369

WEIGHTED SKEW (LOGS)= -0.48
MEAN (LOGS)= 0.52
STANDARD DEV. (LOGS)= 1.04

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
65.0	0.41	3,570	0.0	1.0	12.4	1.7	4.0

09505200 WET BEAVER CREEK NEAR RIMROCK, AZ

LOCATION.--Lat 34°40'29", long 111°40'17", in NW¼SW¼ sec.24, T.15 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on right bank 4.5 mi northeast of Rimrock and 5.7 mi upstream from Red Tank Draw.

DRAINAGE AREA.--111 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1962	02-12-62	1,870	1976	02-09-76	6,880
1963	08-27-63	748	1977	04-07-77	155
1964	08-06-64	2,030	1978	03-01-78	4,360
1965	01-06-65	6,100	1979	12-18-78	7,560
1966	11-25-65	6,150	1980	02-19-80	10,900
1967	07-31-67	4,340	1981	04-05-81	368
1968	03-10-68	982	1982	03-12-82	6,880
1969	01-25-69	3,500	1983	11-30-82	5,480
1970	09-05-70	7,670	1984	12-27-83	2,740
1971	09-01-71	2,890	1985	12-27-84	3,960
1972	07-16-72	4,020	1986	02-18-86	710
1973	10-19-72	5,490	1987	03-18-87	1,180
1974	03-18-74	119	1988	02-03-88	3,900
1975	04-13-75	1,060	1989	03-29-89	285

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
131	30.1	6,410	35.0	3.0	24.8	2.5	5.1

09505200 WET BEAVER CREEK NEAR RIMROCK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1962-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	231	6.5	19	49	2.6	4.4
NOVEMBER	128	6.8	18	29	1.6	4.1
DECEMBER	253	6.3	43	76	1.8	10.1
JANUARY	149	7.1	34	45	1.3	7.9
FEBRUARY	438	7.1	75	105	1.4	17.6
MARCH	500	7.3	105	115	1.1	24.7
APRIL	433	6.9	82	103	1.3	19.2
MAY	109	6.3	13	22	1.7	3.1
JUNE	9.9	6.0	7.1	0.82	0.11	1.7
JULY	21	6.3	8.8	4.4	0.50	2.1
AUGUST	29	6.3	9.5	5.6	0.59	2.2
SEPTEMBER	82	6.2	12	17	1.4	2.8
ANNUAL	103	7.7	35	26	0.73	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	6.3	5.9	5.8	5.6	5.5	5.4
3	6.3	6.0	5.8	5.7	5.6	5.5
7	6.4	6.1	5.9	5.8	5.6	5.5
14	6.4	6.1	5.9	5.8	5.7	5.6
30	6.6	6.2	6.1	5.9	5.8	5.6
60	6.7	6.4	6.2	6.1	5.9	5.8
90	6.7	6.5	6.4	6.4	6.4	6.4
120	6.8	6.6	6.5	6.5	6.5	6.5
183	7.6	6.8	6.5	6.5	6.5	6.5

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,030	6,100	8,410	11,500	13,800	16,100

WEIGHTED SKEW (LOGS)= -0.54
MEAN (LOGS)= 3.44
STANDARD DEV. (LOGS)= 0.40

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1962-82

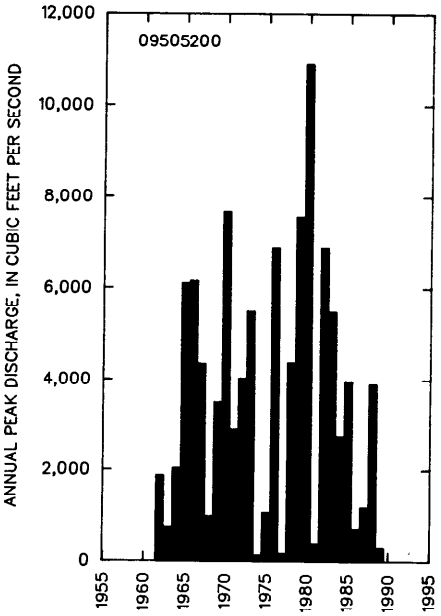
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	940	2,470	3,850	5,890	7,570	9,340
3	602	1,360	1,940	2,690	3,230	3,760
7	361	791	1,110	1,510	1,800	2,080
15	227	480	654	861	999	1,120
30	143	319	452	628	757	882
60	93	213	311	445	549	654
90	73	167	244	355	443	534

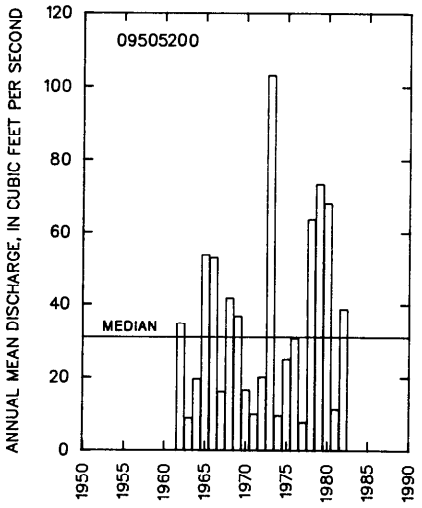
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1962-82

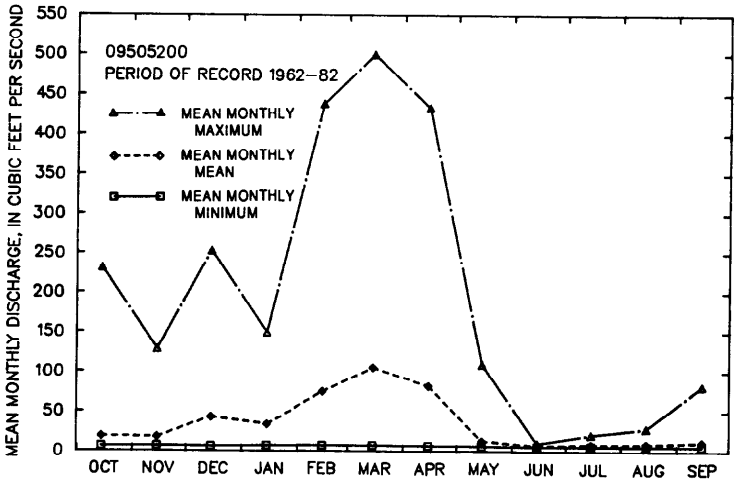
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
471	157	68	25	12	8.2	7.9	7.7	7.4	7.2	6.9	6.4	6.0	5.8	5.7	5.6	5.6

† Reliability of values in column is uncertain, and potential errors are large.

09505200 WET BEAVER CREEK NEAR RIMROCK, AZ--CONTINUED







GILA RIVER BASIN

09505220 ROCKY GULCH NEAR RIMROCK, AZ

LOCATION.--Lat 34°44'49", long 111°29'38", in SE¼NW¼ sec.27, T.16 N, R.8 E., Coconino County, Hydrologic Unit 15060202, in Coconino National Forest, on right bank, on headwaters of Rocky Gulch, and 7 mi northwest of Rimrock.

DRAINAGE AREA.--1.40 mi^2.

REMARKS.--Prior to October 1985 station operated by the U.S. Forest Service.

ANNUAL PEAK DISCHARGE

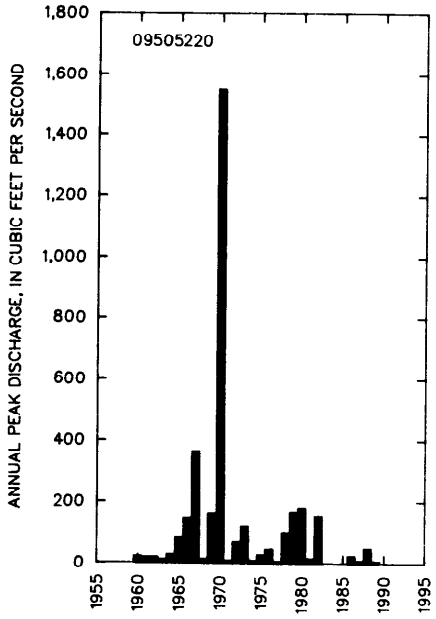
WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1960	00-00-60	22	1974	00-00-74	8.1
1961	00-00-61	19	1975	00-00-75	27
1962	00-00-62	19	1976	02-09-76	45.5
1963	08-11-63	12	1977	04-05-77	5.8
1964	03-31-64	28	1978	03-02-78	98.2
1965	01-06-65	82	1979	12-18-78	166
1966	11-25-65	147	1980	02-14-80	179
1967	07-31-67	363	1981	04-05-81	15.8
1968	02-24-68	13	1982	03-12-82	154
1969	01-25-69	162	1986	04-02-86	24
1970	09-05-70	1,550	1987	03-09-87	7.9
1971	00-00-71	8.1	1988	04-25-88	48
1972	00-00-72	69	1989	03-28-89	6.5
1973	00-00-73	121			

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
421	1.5	7,190	98.0	3.0	25.0	2.7	4.8

09505250 RED TANK DRAW NEAR RIMROCK, AZ

LOCATION.--Lat 34°41'43", long 111°42'49", in SE¼NE¼ sec.16, T.15 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on left bank 2.5 mi downstream from confluence of Rarick and Mullican Canyons, and 3.5 mi northeast of Rimrock.

DRAINAGE AREA.--48.0 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	03-22-58	1,280
1959	02-17-59	113
1960	12-25-59	1,230
1961	03-31-61	457
1962	02-08-62	620
1963	03-22-63	12
1964	08-02-64	1,970
1965	04-04-65	1,440
1966	11-25-65	2,010
1967	12-07-66	425
1968	02-14-68	327
1969	01-25-69	1,650
1970	09-05-70	10,500
1971	10-03-70	12
1972	12-26-71	745
1973	10-19-72	2,720
1974	01-21-74	34
1975	04-13-75	407
1976	02-09-76	1,800
1977	04-06-77	16
1978	02-23-78	441

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
183	19.3	5,910	23.0	3.0	21.6	2.4	4.8

09505250 RED TANK DRAW NEAR RIMROCK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	80	0.00	4.2	17	4.1	4.9
NOVEMBER	41	0.00	4.4	12	2.6	5.1
DECEMBER	104	0.00	10	25	2.4	11.8
JANUARY	46	0.00	7.0	13	1.9	8.0
FEBRUARY	79	0.00	16	23	1.4	18.5
MARCH	161	0.02	27	42	1.6	31.0
APRIL	110	0.00	14	30	2.2	16.0
MAY	3.7	0.00	0.25	0.82	3.3	0.3
JUNE	0.05	0.00	0.01	0.01	2.7	0.0
JULY	1.5	0.00	0.07	0.32	4.6	0.1
AUGUST	8.8	0.00	0.50	1.9	3.9	0.6
SEPTEMBER	62	0.00	3.4	14	4.0	3.8
ANNUAL	37	0.04	7.2	9.1	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120						
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1958-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
724	1,860	3,090	5,410	7,810	10,900

WEIGHTED SKEW (LOGS)= 0.18
MEAN (LOGS)= 2.87
STANDARD DEV. (LOGS)= 0.47

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-78

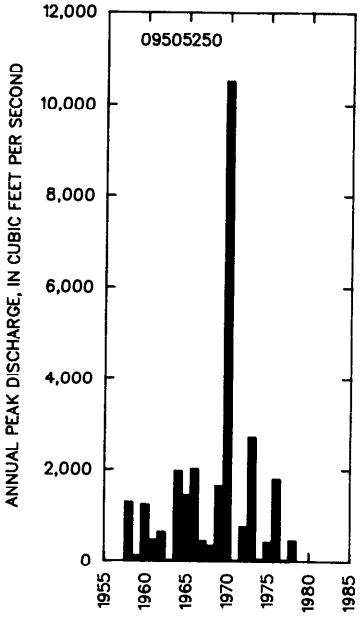
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	208	755	1,310	2,170	2,880	3,620
3	129	424	691	1,060	1,330	1,590
7	75	247	400	606	755	894
15	45	151	247	378	474	564
30	26	96	164	267	349	430
60	16	61	109	184	248	314
90	12	46	82	140	189	240

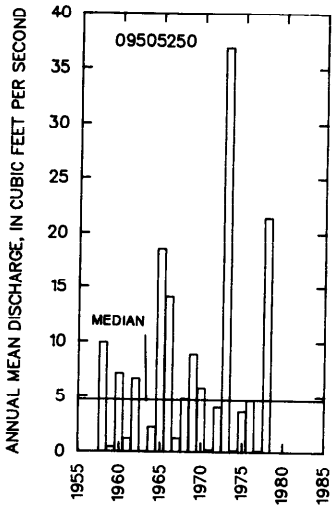
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-78

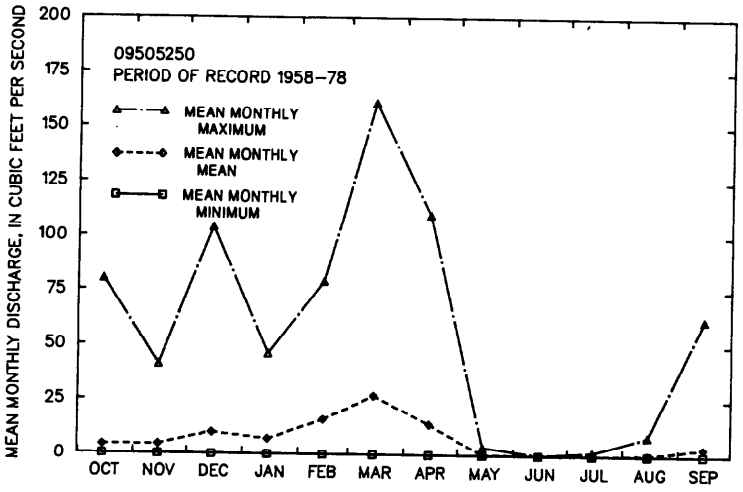
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
174	30	4.7	0.84	0.25	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09505250 RED TANK DRAW NEAR RIMROCK, AZ--CONTINUED







09505300 RATTLESNAKE CANYON NEAR RIMROCK, AZ

LOCATION.--Lat 34°46'01", long°111 40'23", in NW¼SW¼ sec.24, T.16 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on left bank 2.6 mi upstream from mouth, 7 mi northeast of Beaver Creek Ranger Station, and 9 mi northeast of Rimrock.

DRAINAGE AREA.--24.6 mi2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	09-12-58	1,050	1970	09-05-70	3,590
1959	02-17-59	119	1971	09-01-71	741
1960	12-25-59	590	1972	12-26-71	675
1961	09-17-61	384	1973	12-28-72	1,500
1962	02-12-62	775	1974	04-03-74	52
1963	03-23-63	18	1975	04-13-75	311
1964	03-30-64	288	1976	02-09-76	1,200
1965	01-06-65	1,430	1977	04-06-77	69
1966	12-30-65	1,880	1978	03-01-78	1,610
1967	12-07-66	1,240	1979	03-08-79	2,850
1968	01-28-68	306	1980	02-14-80	4,000
1969	01-25-69	2,160			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
174	15.5	6,560	33.0	3.0	22.8	2.5	5.1

09505300 RATTLESNAKE CANYON NEAR RIMROCK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1958-80

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	60	0.00	2.8	12	4.5	2.5
NOVEMBER	42	0.00	4.2	10	2.5	3.9
DECEMBER	86	0.00	12	25	2.1	10.8
JANUARY	78	0.00	12	23	1.9	10.7
FEBRUARY	165	0.00	21	36	1.7	19.6
MARCH	135	0.00	31	32	1.0	28.6
APRIL	116	0.00	22	33	1.5	20.2
MAY	37	0.00	2.1	7.7	3.7	1.9
JUNE	0.01	0.00	0.00	0.00	3.3	0.0
JULY	0.28	0.00	0.02	0.06	3.3	0.0
AUGUST	0.88	0.00	0.10	0.24	2.3	0.1
SEPTEMBER	29	0.00	1.7	6.1	3.6	1.6
ANNUAL	30	0.14	9.0	9.3	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-80

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120						
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
872	1,880	2,750	4,030	5,110	6,290

WEIGHTED SKEW (LOGS)= -0.29
MEAN (LOGS)= 2.92
STANDARD DEV. (LOGS)= 0.42

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1958-80

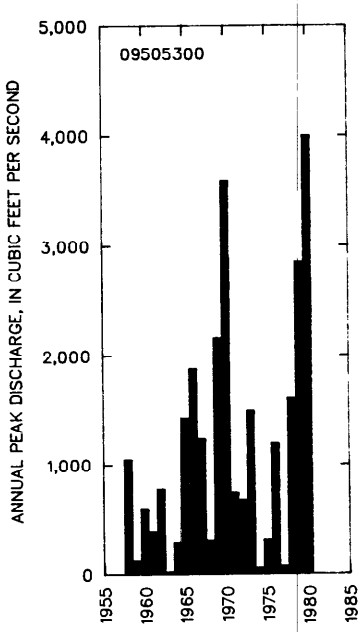
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	264	731	1,160	1,790	2,320	2,870
3	155	403	622	944	1,210	1,480
7	98	240	355	510	628	743
15	61	144	206	284	339	391
30	39	95	140	197	238	278
60	24	66	102	153	192	230
90	18	53	84	129	165	200

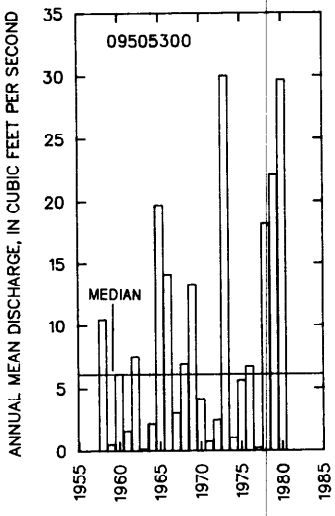
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-80

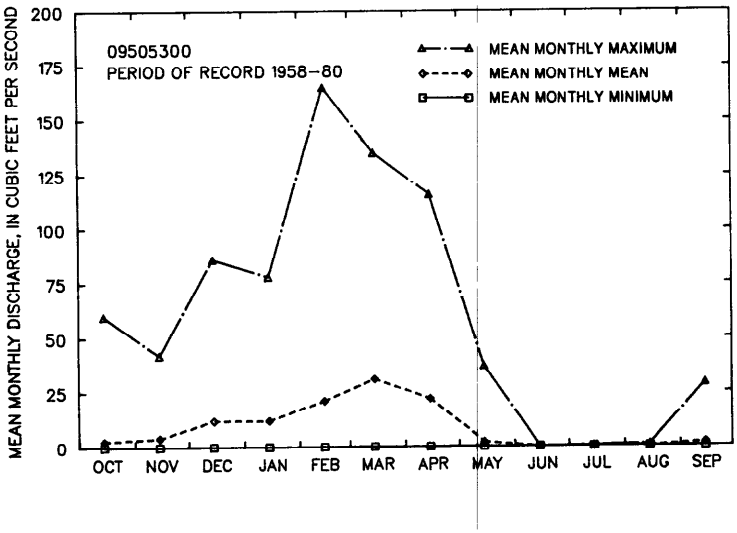
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
155	51	21	6.7	0.91	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09505300 RATTLESNAKE CANYON NEAR RIMROCK, AZ--CONTINUED







09505350 DRY BEAVER CREEK NEAR RIMROCK, AZ

LOCATION.--Lat 34°43'43", long 111°46'30", in NE¼NW¼ sec.1, T.15 N., R.5 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on left upstream abutment of abandoned highway bridge, 400 ft upstream from present State Highway 179 and 5.5 mi north of Rimrock.

DRAINAGE AREA.--142 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1961	07-14-61	1,610	1976	02-09-76	7,020
1962	02-12-62	2,510	1977	04-07-77	304
1963	08-17-63	3,260	1978	03-01-78	8,410
1964	03-30-64	1,160	1979	12-18-78	24,200
1965	01-06-65	7,970	1980	02-14-80	18,600
1966	11-23-65	9,670	1981	08-11-81	1,250
1967	12-07-66	9,460	1982	03-12-82	7,790
1968	02-11-68	652	1983	11-30-82	8,190
1969	01-25-69	10,600	1984	12-04-83	5,780
1970	09-05-70	26,600	1985	12-27-84	4,250
1971	09-01-71	537	1986	11-30-85	4,340
1972	12-26-71	2,740	1987	03-09-87	1,160
1973	12-28-72	6,160	1988	04-25-88	2,650
1974	04-03-74	253	1989	03-29-89	404
1975	04-14-75	1,220			

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
137	32.5	6,220	56.0	2.8	23.1	2.5	5.1

09505350 DRY BEAVER CREEK NEAR RIMROCK, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1961-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	246	0.00	12	46	4.0	2.1
NOVEMBER	251	0.00	23	56	2.4	4.2
DECEMBER	602	0.00	76	146	1.9	13.6
JANUARY	384	0.00	44	93	2.1	7.9
FEBRUARY	850	0.00	108	172	1.6	19.3
MARCH	678	0.00	153	163	1.1	27.3
APRIL	598	0.00	118	145	1.2	21.0
MAY	208	0.00	10	39	3.8	1.8
JUNE	0.17	0.00	0.01	0.03	4.4	0.0
JULY	2.5	0.00	0.18	0.49	2.7	0.0
AUGUST	12	0.00	1.2	2.6	2.2	0.2
SEPTEMBER	224	0.00	14	51	3.6	2.6
ANNUAL	139	1.1	46	42	0.91	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1962-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1961-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
4,170	9,690	14,800	22,800	30,000	38,200

WEIGHTED SKEW (LOGS)= -0.20
MEAN (LOGS)= 3.60
STANDARD DEV. (LOGS)= 0.45

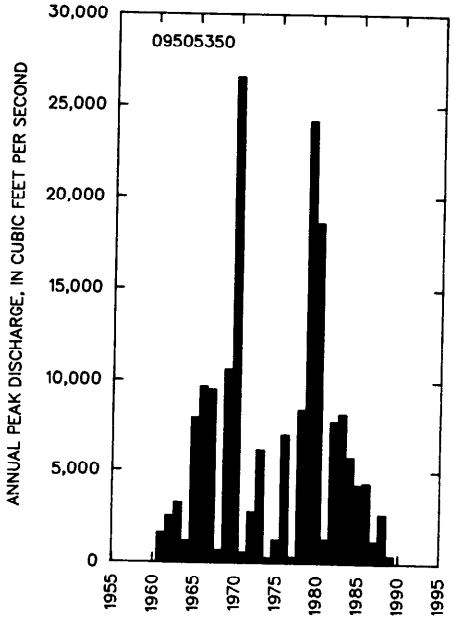
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1961-89

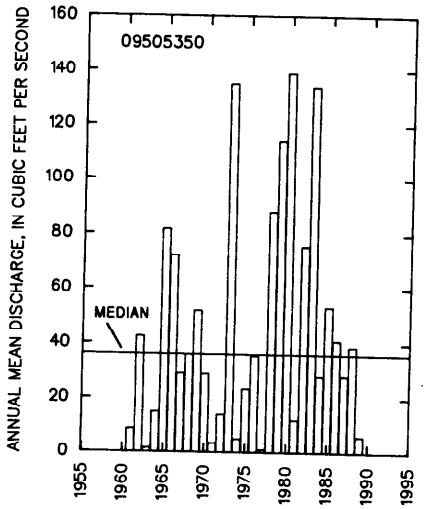
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	1,370	3,840	6,320	10,400	14,100	18,400
3	904	2,230	3,370	5,010	6,330	7,690
7	580	1,280	1,800	2,430	2,880	3,290
15	369	745	983	1,250	1,410	1,550
30	241	499	659	831	934	1,020
60	153	343	470	613	702	778
90	116	270	376	497	575	641

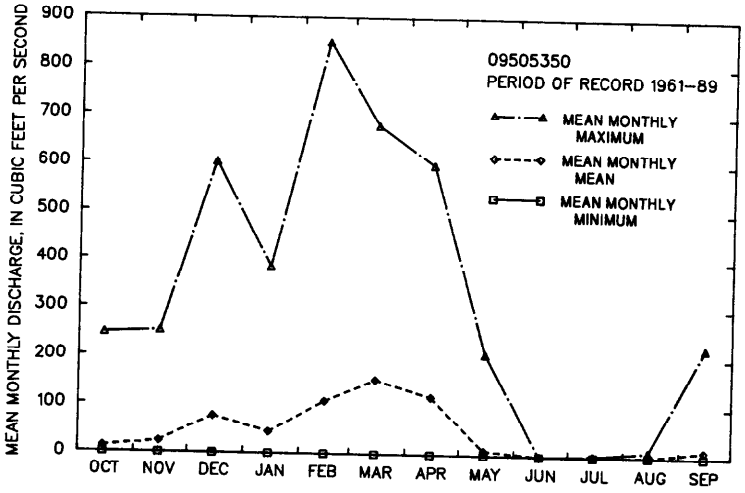
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
753	248	105	38	9.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.


09505350
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
30,000
25,000
20,000
15,000
10,000
5,000
0
1955
1960
1965
1970
1975
1980
1985
1990
1995


09505350
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
MEDIAN
160
140
120
100
80
60
40
20
0
1955
1960
1965
1970
1975
1980
1985
1990
1995


09505350
PERIOD OF RECORD 1961-89
MEAN MONTHLY MAXIMUM
MEAN MONTHLY MEAN
MEAN MONTHLY MINIMUM
MEAN MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND
900
800
700
600
500
400
300
200
100
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

09505550 VERDE RIVER BELOW CAMP VERDE, AZ

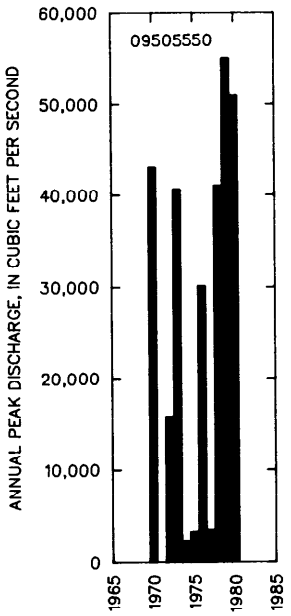
LOCATION.--Lat 34°33'02", long 111°51'02", in SW¼NW¼ sec.5, T.13 N., R.5 E., Yavapai County, Hydrologic Unit 15060203, on downstream side of bridge on county highway, 0.5 mi southeast of Camp Verde, and 2.2 mi downstream from Beaver Creek.

DRAINAGE AREA.--4,653 mi^2, of which 365 mi^2 is noncontributing (including 357 mi^2 in Aubrey Valley Playa, a closed basin).

REMARKS.--About 10,000 acres above station are irrigated by surface water and ground water.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1970	09-05-70	43,000	HP
1972	12-26-71	15,800	
1973	10-20-72	40,600	
1974	07-08-74	2,200	
1975	04-15-75	3,280	
1976	02-09-76	30,100	
1977	08-23-77	3,490	
1978	03-01-78	41,000	
1979	12-19-78	55,000	
1980	02-15-80	50,900	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
---	---	---	---	---	---

WEIGHTED SKEW (LOGS)= ---
MEAN (LOGS)= ---
STANDARD DEV. (LOGS)= ---

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
17.9	153	5,544	70.0	2.5	17.6	2.1	4.1

09505600 DIRTY NECK CANYON NEAR CLINTS WELL, AZ

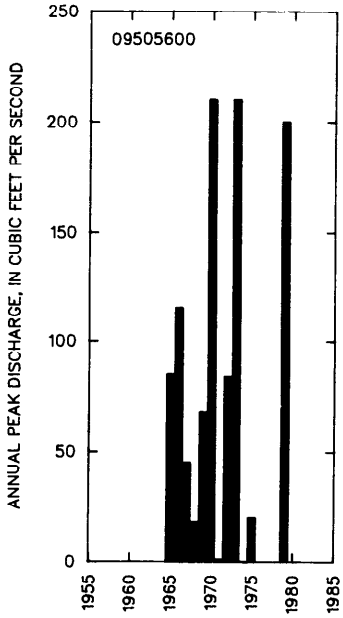
LOCATION.--Lat 34°30'45", long 111°21'30", in N½ sec.23, T.13 N., R.9 E., Coconino County, Hydrologic Unit 15060203, at State Highway 87, 4 mi southwest of Clints Well, and 18 mi north of Payson.

DRAINAGE AREA.--3.42 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1965	01-06-65	85	
1966	12-30-65	115	
1967	12-06-66	45	
1968	00-00-68	18	
1969	01-25-69	68	
1970	09-05-70	210	
1971	00-00-71	1.0	LT
1972	12-26-71	84	
1973	10-19-72	210	
1974	00-00-74	0	
1975	00-00-75	20	
1979	12-18-78	[1]200	HP

[1]Highest since 1972.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-75, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
62.7	151	231	353	458	573

WEIGHTED SKEW (LOGS)= -0.37
MEAN (LOGS)= 1.77
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
190	3.4	7,140	99.0	3.0	26.0	2.7	4.7

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ

LOCATION.--Lat 34°32'19", long 111°41'36", in NW¼NW¼ sec.11, T.13 N., R.6 E., Yavapai County, Hydrologic Unit 15060203, in Coconino National Forest, on left bank at Bull Pen Ranch, 11 mi upstream from mouth, and 9 mi east of Camp Verde.

DRAINAGE AREA.--241 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1965	01-06-65	6,510
1966	12-30-65	6,330
1967	12-07-66	2,670
1968	02-26-68	1,300
1969	01-26-69	3,870
1970	09-05-70	1,050
1971	09-02-71	1,550
1972	12-26-71	6,660
1973	10-19-72	11,300
1974	01-21-74	308
1975	04-15-75	2,730
1976	02-09-76	8,130
1977	07-26-77	101
1978	03-01-78	13,800
1979	12-18-78	22,400
1980	02-19-80	15,100
1981	08-12-81	801
1982	03-12-82	9,890
1983	11-30-82	6,700
1984	12-27-83	3,630
1985	12-27-84	5,140
1986	03-12-86	885
1987	03-18-87	2,110
1988	08-29-88	6,540
1989	03-08-89	446

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
112	34.4	6,680	78.0	3.0	23.4	2.6	4.8

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	458	14	39	90	2.3	4.9
NOVEMBER	110	15	31	27	0.87	3.9
DECEMBER	758	16	109	172	1.6	13.5
JANUARY	255	16	53	63	1.2	6.6
FEBRUARY	956	15	145	207	1.4	18.0
MARCH	886	15	208	224	1.1	25.8
APRIL	923	15	117	189	1.6	14.5
MAY	157	15	28	29	1.0	3.4
JUNE	25	13	16	2.9	0.18	2.0
JULY	33	14	18	4.4	0.24	2.2
AUGUST	51	14	20	8.6	0.43	2.5
SEPTEMBER	113	14	22	20	0.89	2.8
ANNUAL	199	16	67	50	0.74	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	13	12	12	11	11	11
3	13	12	12	11	11	11
7	13	12	12	12	11	11
14	14	13	12	12	12	11
30	14	13	13	12	12	12
60	15	14	13	13	13	13
90	16	15	14	14	13	13
120	16	15	15	14	14	14
183	17	16	16	16	16	16

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1965-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
4,430	9,280	13,400	19,400	24,500	30,000

WEIGHTED SKEW (LOGS)= -0.26
MEAN (LOGS)= 3.63
STANDARD DEV. (LOGS)= 0.40

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-89

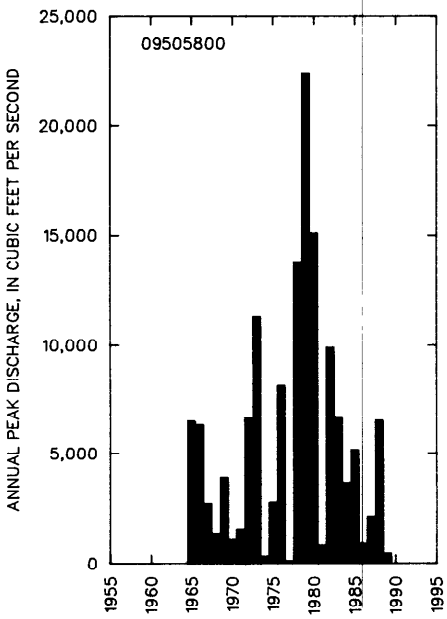
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,560	4,510	7,260	11,400	14,800	18,400
3	941	2,600	4,120	6,390	8,250	10,200
7	567	1,550	2,440	3,760	4,850	5,980
15	350	911	1,410	2,140	2,730	3,350
30	230	586	902	1,370	1,760	2,180
60	155	378	574	866	1,110	1,370
90	128	301	452	674	859	1,060

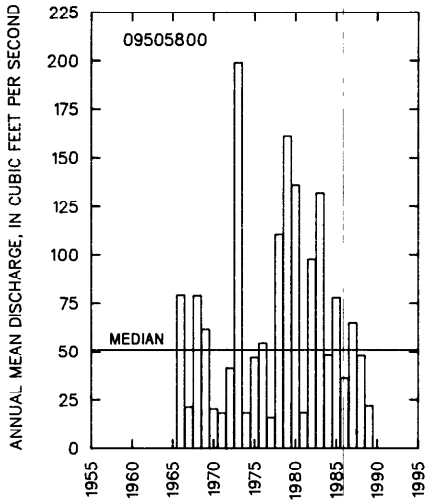
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-89

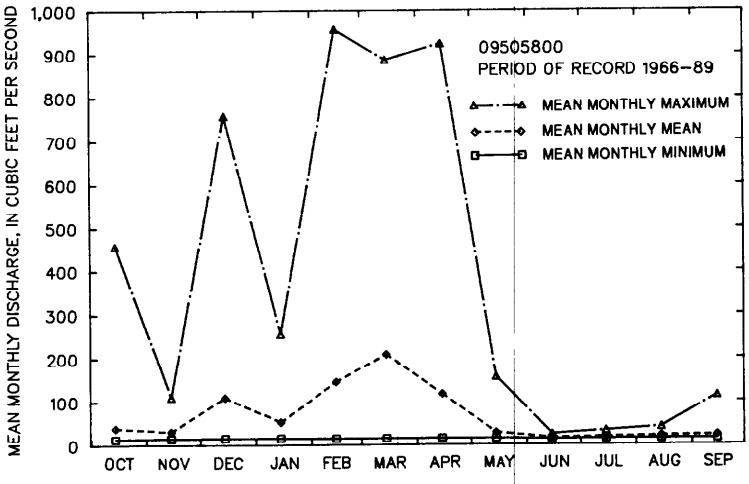
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
887	255	108	51	32	24	20	19	18	17	16	14	14	13	13	12	11

† Reliability of values in column is uncertain, and potential errors are large.

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--CONTINUED







09505900 COTTONWOOD WASH NEAR CAMP VERDE, AZ

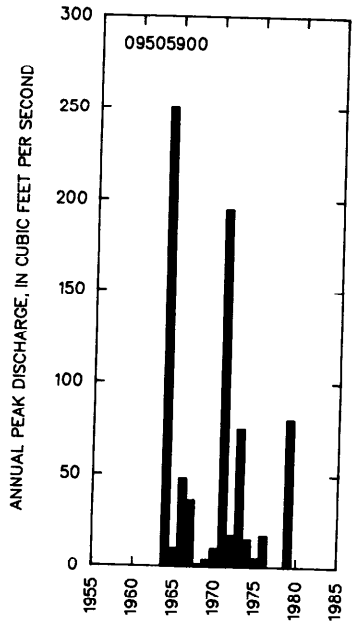
LOCATION.--Lat 34°30'20", long 111°45'10", in NE¼ sec.19, T.13 N., R.6 E., Yavapai County, Hydrologic Unit 15060203, at Camp Verde-Pine road, 7 mi southeast of Camp Verde.

DRAINAGE AREA--0.64 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	00-00-64	250	
1965	09-18-65	10	ES
1966	07-29-66	48	
1967	09-00-67	36	
1968	00-00-68	1.0	LT
1969	08-00-69	4.0	ES
1970	08-14-70	10	ES
1971	09-29-71	195	
1972	09-29-72	17	
1973	10-19-72	75	
1974	08-00-74	15	
1975	11-02-74	5.0	ES
1976	00-00-76	17	
1979	12-18-78	[1]80	HP

[1]Highest since 1972.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-76, 1979

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
23.4	75.9	141	273	420	619

WEIGHTED SKEW (LOGS)= 0.03
MEAN (LOGS)= 1.37
STANDARD DEV. (LOGS)= 0.61

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
385	1.1	3,540	0.0	1.0	14.5	2.1	4.1

09506000 VERDE RIVER NEAR CAMP VERDE, AZ

LOCATION.--Water-stage recorder, lat 34°27′, long 111°47′, in sec.1, T.12 N., R.5 E., Yavapai County, Hydrologic Unit 15060203, (unsurveyed), a short distance downstream from Camp Verde dam site, 750 feet upstream from Chasm Creek, and 9 mi southeast of Camp Verde.

DRAINAGE AREA.--5,010 mi^2 of which 365 mi^2 is noncontributing (including 357 mi^2 in Aubrey Valley Playa, a closed basin).

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1934	07-17-34	5,500
1935	04-09-35	11,500
1936	02-24-36	6,820
1937	02-07-37	41,700
1938	03-03-38	97,000
1939	09-13-39	16,100
1940	08-04-40	7,560
1941	03-14-41	30,000
1942	10-13-41	6,080
1943	03-05-43	11,600
1944	03-14-44	5,160
1945	03-16-45	8,380
1989	03-08-89	777

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
17.9	168	5,560	70.0	2.5	17.6	2.1	4.1

09506000 VERDE RIVER NEAR CAMP VERDE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1935-45, 1989

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	551	138	221	136	0.61	4.2
NOVEMBER	339	169	212	53	0.25	4.0
DECEMBER	1,350	199	321	325	1.0	6.0
JANUARY	819	198	324	199	0.62	6.1
FEBRUARY	4,400	221	1,030	1,270	1.2	19.4
MARCH	4,030	280	1,570	1,170	0.74	29.6
APRIL	3,050	126	815	862	1.1	15.3
MAY	337	85	139	74	0.53	2.6
JUNE	114	61	84	15	0.18	1.6
JULY	209	65	114	42	0.37	2.1
AUGUST	416	114	220	92	0.42	4.1
SEPTEMBER	1,150	83	265	290	1.1	5.0
ANNUAL	1,060	159	439	257	0.58	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-45

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	61	52	48	45	42	40
3	64	54	49	46	42	39
7	67	57	52	48	43	41
14	70	60	56	52	49	46
30	76	66	62	59	56	54
60	84	75	72	70	68	66
90	93	82	78	76	74	72
120	112	100	95	92	88	87
183	158	130	120	113	107	104

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1934-45, 1989

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
11,100	25,600	40,700	68,300	96,600	133,000

WEIGHTED SKEW (LOGS)= 0.31
MEAN (LOGS)= 4.07
STANDARD DEV. (LOGS)= 0.41

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1935-45, 1989

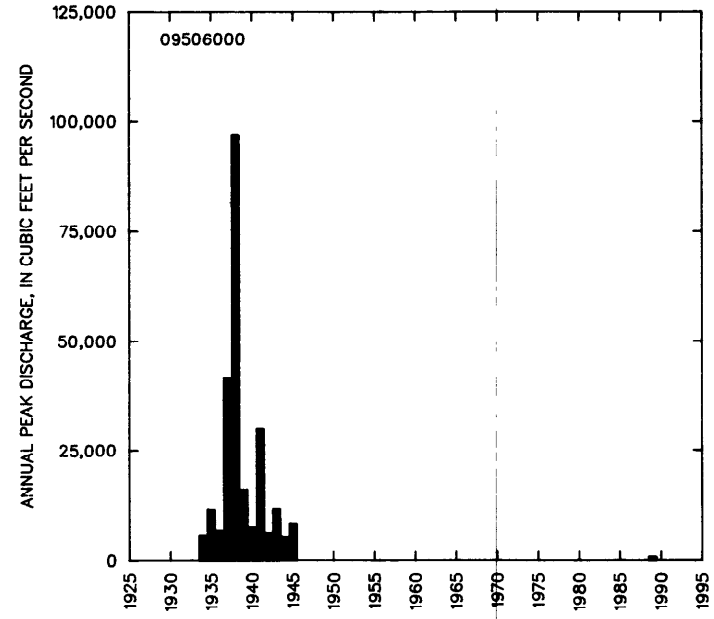
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	6,760	16,000	24,200	36,600	47,100	58,600
3	4,550	11,000	17,200	27,400	36,900	48,100
7	3,090	6,750	9,950	14,900	19,100	23,800
15	2,130	4,410	6,430	9,610	12,400	15,700
30	1,660	3,150	4,320	5,970	7,310	8,720
60	1,170	2,240	3,150	4,510	5,680	6,990
90	895	1,690	2,370	3,430	4,380	5,460

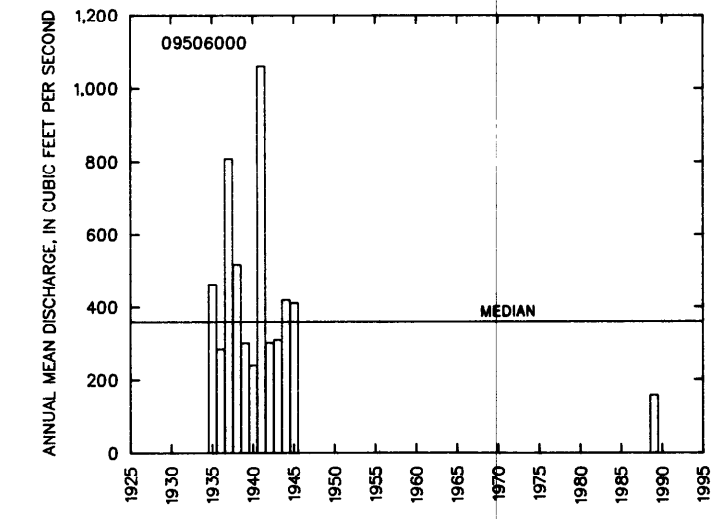
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-45, 1989

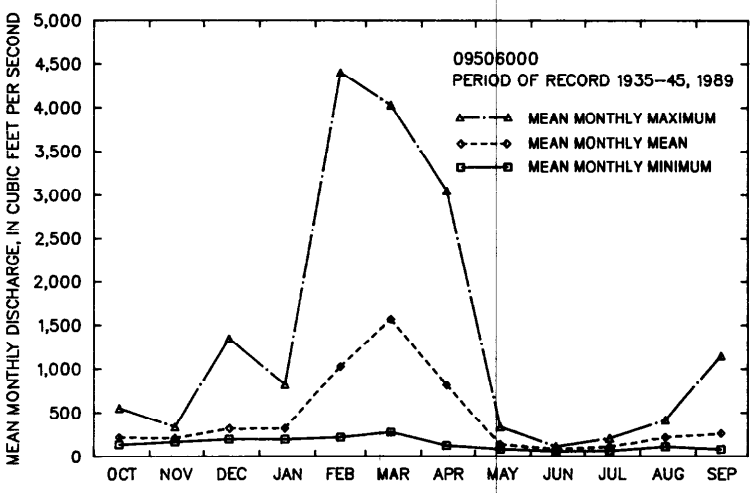
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,880	1,580	837	494	332	246	214	189	163	129	104	84	72	62	55	51	44

† Reliability of values in column is uncertain, and potential errors are large.

09506000 VERDE RIVER NEAR CAMP VERDE, AZ--CONTINUED







09507600 EAST VERDE RIVER NEAR PINE, AZ

LOCATION.--Lat 34°23'30", long 111°16'05", in SE¼SW¼ sec.26, T.12 N., R.10 E., Gila County, Hydrologic Unit 15060203, on right bank 0.8 mi upstream from Dude Creek, 2.7 mi south of Washington Park, and 10 mi east of Pine.

DRAINAGE AREA.--6.34 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	02-13-62	38	
1963	09-11-63	264	
1964	08-04-64	143	
1965	01-06-65	127	
1966	12-30-65	960	
1967	07-31-67	1,350	
1968	08-02-68	330	
1969	01-25-69	298	
1970	09-05-70	2,820	
1971	08-28-71	99	
1972	12-26-71	60	ES
1973	10-19-72	2,700	
1974	07-21-74	120	

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
303	4.4	6,430	99.0	3.0	30.0	2.6	5.0

09507600 EAST VERDE RIVER NEAR PINE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1962-71

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	29	0.49	8.8	13	1.4	6.1
NOVEMBER	29	0.69	9.2	12	1.3	6.4
DECEMBER	28	0.59	8.8	12	1.4	6.1
JANUARY	28	0.60	10	11	1.1	7.0
FEBRUARY	33	0.62	12	12	0.98	8.7
MARCH	36	1.3	15	13	0.85	10.3
APRIL	38	0.84	18	13	0.76	12.3
MAY	33	0.29	16	14	0.86	11.3
JUNE	29	0.10	12	13	1.1	8.1
JULY	29	0.11	11	13	1.2	7.6
AUGUST	30	0.04	11	12	1.1	7.6
SEPTEMBER	28	0.24	12	12	0.99	8.3
ANNUAL	26	0.73	12	9.3	0.78	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1963-71

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1	0.55	0.00	0.00	0.00	0.00	0.00
3	0.56	0.00	0.00	0.00	0.00	0.00
7	0.48	0.00	0.00	0.00	0.00	0.00
14	0.42	0.08	0.00	0.00	0.00	0.00
30	0.55	0.12	0.05	0.03	0.02	0.01
60	0.84	0.17	0.08	0.04	0.02	0.01
90	1.2	0.25	0.12	0.07	0.04	0.02
120	1.6	0.37	0.18	0.11	0.06	0.04
183	3.1	0.71	0.33	0.17	0.08	0.05

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1962-74

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
288	954	1,810	3,620	5,700	8,600

WEIGHTED SKEW (LOGS)= 0.10
MEAN (LOGS)= 2.47
STANDARD DEV. (LOGS)= 0.61

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1962-71

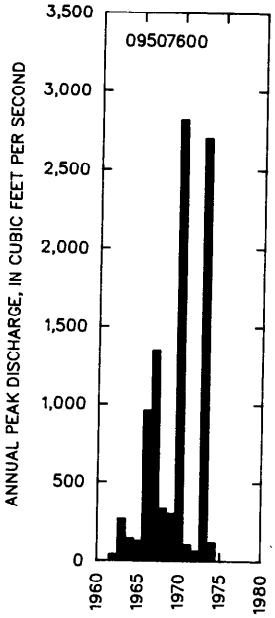
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	57	145	224	346	450	563
3	41	95	134	180	211	239
7	28	57	73	88	96	102
15	23	46	58	70	76	80
30	20	41	53	65	71	77
60	17	37	50	64	72	78
90	15	36	51	68	79	88

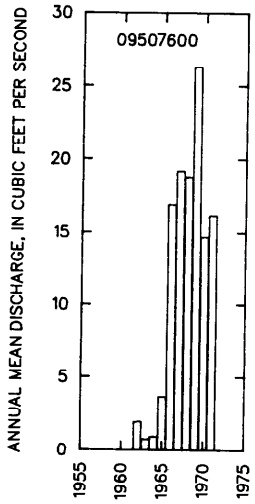
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1962-71

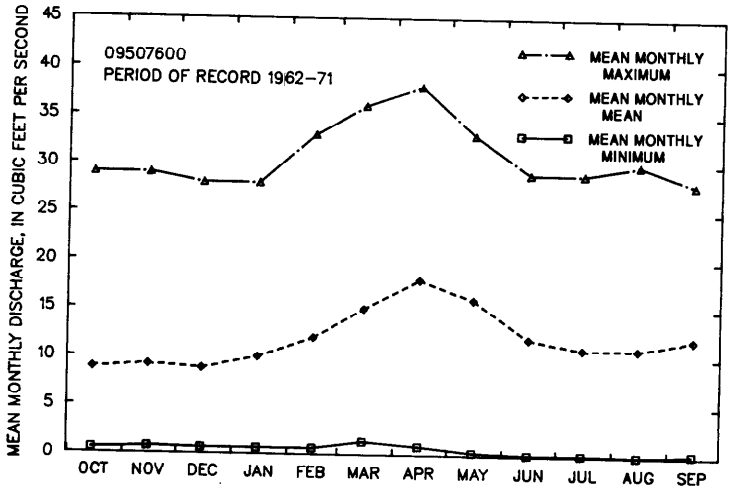
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
42	35	32	29	28	25	9.5	2.8	1.2	0.78	0.64	0.47	0.22	0.11	0.10	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09507600 EAST VERDE RIVER NEAR PINE, AZ--CONTINUED







09507700 WEBBER CREEK ABOVE WEST FORK WEBBER CREEK, NEAR PINE, AZ

LOCATION.--Lat 34°24'40", long 111°22'20", in SW¼ sec.23, T.12 N., R.9 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, in Tonto National Forest, on left bank 0.2 mi upstream from West Fork, and 4.9 mi northeast of Pine.

DRAINAGE AREA.--4.79 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1959	08-24-59	21
1960	12-25-59	84
1961	09-13-61	399
1962	04-08-62	32
1963	08-22-63	19
1964	08-08-64	126
1965	01-07-65	148
1966	12-30-65	366
1967	12-07-66	153
1968	04-01-68	32
1969	01-26-69	134
1970	09-05-70	1,220
1971	08-25-71	26
1972	12-26-71	50
1973	10-19-72	686
1974	01-21-74	12

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
634	3.8	6,980	100	3.0	27.5	2.8	5.2

09507700 WEBBER CREEK ABOVE WEST FORK WEBBER CREEK, NEAR PINE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1960-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	26	0.25	2.2	6.7	3.0	7.4
NOVEMBER	4.6	0.31	1.1	1.3	1.2	3.7
DECEMBER	16	0.32	2.8	4.1	1.5	9.2
JANUARY	11	0.51	3.0	3.4	1.1	10.0
FEBRUARY	8.4	0.48	2.6	2.5	0.99	8.5
MARCH	15	0.52	5.4	5.1	0.95	17.9
APRIL	29	0.50	7.7	9.2	1.2	25.6
MAY	21	0.43	2.7	5.2	2.0	8.9
JUNE	1.3	0.18	0.53	0.35	0.65	1.8
JULY	0.53	0.16	0.33	0.11	0.33	1.1
AUGUST	1.2	0.31	0.62	0.34	0.56	2.1
SEPTEMBER	8.8	0.24	1.1	2.2	1.9	3.8
ANNUAL	9.1	0.61	2.5	2.3	0.92	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1961-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.19	0.15	0.13	0.12	0.10	0.09
3	0.20	0.16	0.13	0.12	0.10	0.09
7	0.21	0.16	0.14	0.12	0.10	0.09
14	0.22	0.18	0.15	0.14	0.12	0.11
30	0.25	0.21	0.19	0.17	0.16	0.15
60	0.30	0.25	0.23	0.21	0.20	0.19
90	0.34	0.29	0.26	0.24	0.22	0.21
120	0.39	0.32	0.29	0.26	0.24	0.22
183	0.50	0.39	0.35	0.31	0.28	0.25

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-74

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
90	291	544	1,070	1,660	2,480

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 1.96
STANDARD DEV. (LOGS)= 0.60

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1960-74

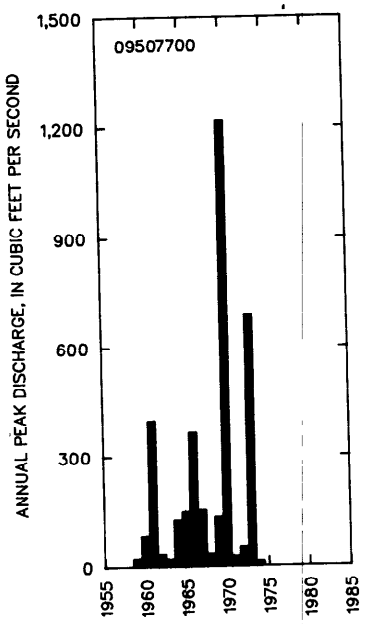
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	39	117	200	343	479	640
3	27	70	110	171	224	282
7	18	43	61	85	103	120
15	12	27	38	51	61	71
30	8.2	19	28	42	53	66
60	5.1	12	19	30	40	52
90	4.1	9.8	15	25	33	44

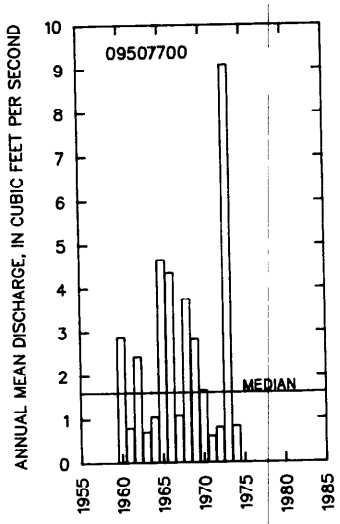
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-74

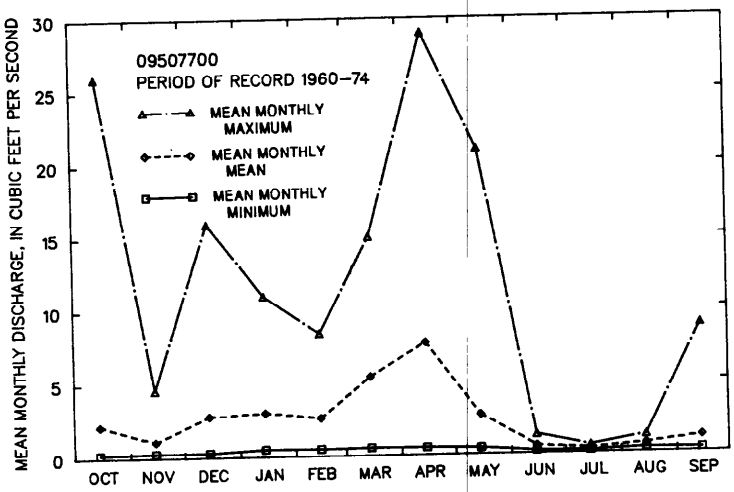
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
31	11	4.8	3.2	2.4	1.1	0.77	0.60	0.53	0.46	0.36	0.27	0.23	0.20	0.17	0.14	0.11

† Reliability of values in column is uncertain, and potential errors are large.

09507700 WEBBER CREEK ABOVE WEST FORK WEBBER CREEK, NEAR PINE, AZ--CONTINUED







09507980 EAST VERDE RIVER NEAR CHILDS, AZ

LOCATION.--Lat 34°17'00", long 111°38'50", in sec.21, T.11 N., R.7 E. (unsurveyed), Gila County Hydrologic Unit 15060203, in Tonto National Forest, on left bank 1.3 mi upstream from mouth, and 6 mi southeast of Childs.

DRAINAGE AREA.--328 mi^2.

REMARKS.--Since September 30, 1965, records include transbasin diversions from East Clear Creek to headwaters of East Verde River.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1961	09-09-61	1,340	1976	02-09-76	11,400
1962	03-22-62	540	1977	08-17-77	502
1963	08-22-63	11,400	1978	03-01-78	15,000
1964	09-13-64	1,280	1979	01-17-79	11,600
1965	01-06-65	5,980	1980	02-20-80	14,100
1966	12-22-65	17,000	1981	09-01-81	617
1968	12-19-67	1,410	1982	02-11-82	4,510
1969	01-26-69	6,100	1983	11-30-82	6,250
1970	09-05-70	23,500	1984	12-27-83	1,690
1971	08-11-71	931	1985	12-27-84	5,570
1972	08-11-72	740	1986	11-26-85	1,760
1973	10-19-72	10,000	1987	03-05-87	1,030
1974	01-21-74	802	1988	02-03-88	4,000
1975	04-11-75	814	1989	02-05-89	1,750

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
91.6	32.0	5,140	50.0	2.8	24.7	2.7	5.0

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	308	1.3	39	61	1.6	4.6
NOVEMBER	157	2.4	41	38	0.93	4.8
DECEMBER	443	4.4	78	117	1.5	9.1
JANUARY	409	6.7	92	116	1.3	10.8
FEBRUARY	1,150	5.8	177	254	1.4	20.7
MARCH	968	6.3	183	236	1.3	21.4
APRIL	371	9.6	87	87	1.0	10.1
MAY	115	12	37	23	0.63	4.3
JUNE	49	1.7	24	14	0.57	2.8
JULY	51	0.48	26	14	0.55	3.0
AUGUST	77	7.4	32	18	0.56	3.8
SEPTEMBER	282	0.73	39	56	1.5	4.6
ANNUAL	185	14	71	56	0.79	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	5.3	1.7	0.81	0.41	0.17	0.09
3	5.6	1.8	0.84	0.42	0.17	0.09
7	6.4	2.0	0.93	0.45	0.18	0.09
14	7.4	2.4	1.1	0.55	0.22	0.11
30	9.9	3.4	1.7	0.87	0.38	0.20
60	12	4.9	2.6	1.5	0.73	0.43
90	15	7.5	4.9	3.3	2.0	1.5
120	18	9.4	6.2	4.2	2.6	1.9
183	23	13	9.7	7.1	4.9	3.8

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1961-66, 1968-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,020	8,480	14,600	26,000	37,800	52,800

WEIGHTED SKEW (LOGS)= -0.01
MEAN (LOGS)= 3.48
STANDARD DEV. (LOGS)= 0.53

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-89

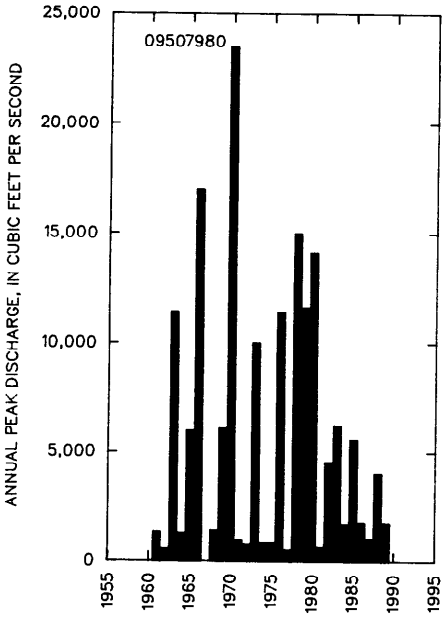
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,240	3,590	6,010	10,100	14,000	18,600
3	759	2,180	3,630	6,070	8,330	11,000
7	458	1,320	2,190	3,630	4,950	6,460
15	284	760	1,230	2,010	2,720	3,540
30	197	492	778	1,250	1,690	2,200
60	138	333	529	868	1,200	1,600
90	113	261	410	670	924	1,240

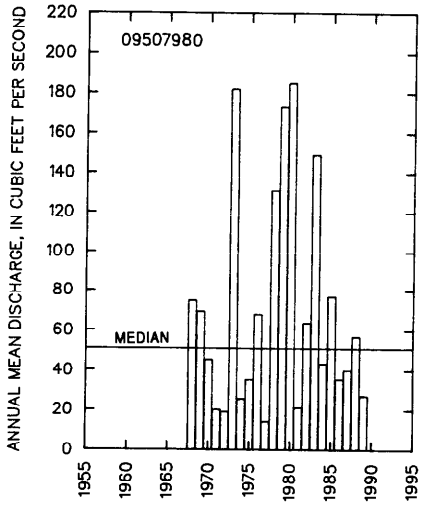
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-89

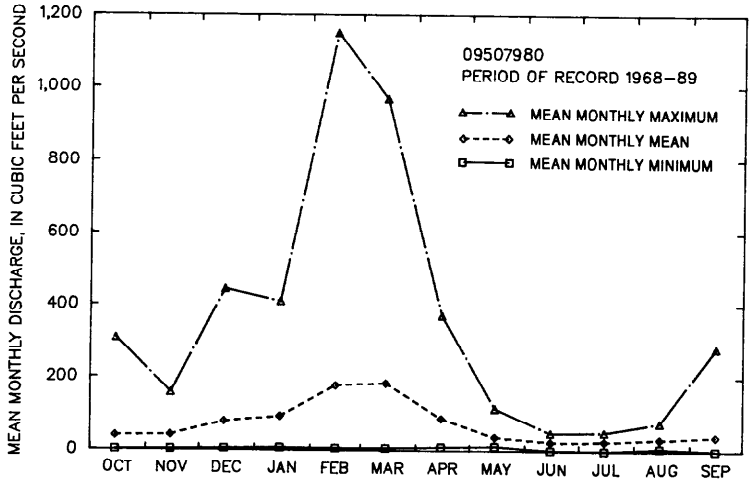
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
834	241	122	72	54	41	34	29	25	19	14	6.6	3.0	1.2	0.84	0.59	0.28

† Reliability of values in column is uncertain, and potential errors are large.

09507980 EAST VERDE RIVER NEAR CHILDS, AZ--CONTINUED







09508300 WET BOTTOM CREEK NEAR CHILDS, AZ
(Hydrologic bench mark station)

LOCATION.--Lat 34°09'39", long 111°41'32", in sec.36, T.9 N., R.6 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.4 mi upstream from mouth, and 13 mi south of Childs.

DRAINAGE AREA.--36.4 mi^2.

REMARKS.--A cumulative departure from the annual mean discharge graph is included because this station is a hydrlogic benchmark station, not because of a long period of record.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1968	12-19-67	5,220
1969	01-26-69	535
1970	09-05-70	5,600
1971	08-03-71	158
1972	12-26-71	89
1973	10-19-72	3,700
1974	01-09-74	744
1975	11-02-74	684
1976	02-09-76	5,940
1977	01-03-77	52
1978	03-02-78	6,660
1979	12-18-78	6,680
1980	02-19-80	6,830
1981	03-08-81	122
1982	02-11-82	1,650
1983	11-30-82	3,220
1984	12-04-83	768
1985	12-27-84	2,090
1986	11-26-85	1,260
1987	03-04-87	522
1988	02-03-88	1,840
1989	02-05-89	851

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
210	17.6	4,810	68.0	1.0	25.0	2.7	5.5

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	103	0.01	6.6	22	3.3	3.7
NOVEMBER	52	0.17	9.6	14	1.5	5.3
DECEMBER	111	0.28	25	39	1.6	13.8
JANUARY	129	0.26	31	36	1.2	17.3
FEBRUARY	345	0.58	46	76	1.6	25.6
MARCH	321	0.29	45	72	1.6	24.7
APRIL	38	0.09	9.0	12	1.3	4.9
MAY	2.1	0.00	0.63	0.65	1.0	0.3
JUNE	0.55	0.00	0.09	0.14	1.6	0.0
JULY	12	0.00	1.1	2.8	2.6	0.6
AUGUST	31	0.00	3.6	7.5	2.1	2.0
SEPTEMBER	27	0.00	3.2	6.4	2.0	1.8
ANNUAL	41	0.45	15	13	0.89	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1969-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.56	0.12	0.05	0.02	0.01	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,570	4,040	6,470	10,500	14,200	18,500

WEIGHTED SKEW (LOGS)= -0.23
MEAN (LOGS)= 3.17
STANDARD DEV. (LOGS)= 0.51

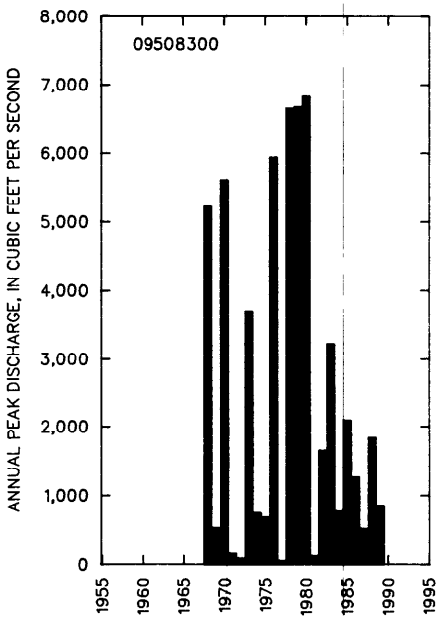
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1968-89

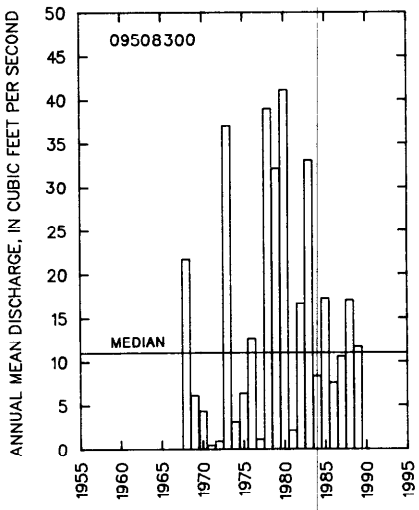
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	510	1,460	2,230	3,240	3,960	4,620
3	309	810	1,170	1,570	1,820	2,030
7	190	482	677	888	1,010	1,110
15	108	269	380	507	585	651
30	64	160	232	321	381	436
60	42	111	166	239	292	342
90	31	82	124	181	223	264

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-89

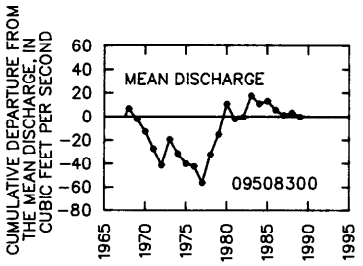
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
270	59	22	12	6.8	2.1	0.88	0.53	0.32	0.16	0.05	0.00	0.00	0.00	0.00	0.00	0.00

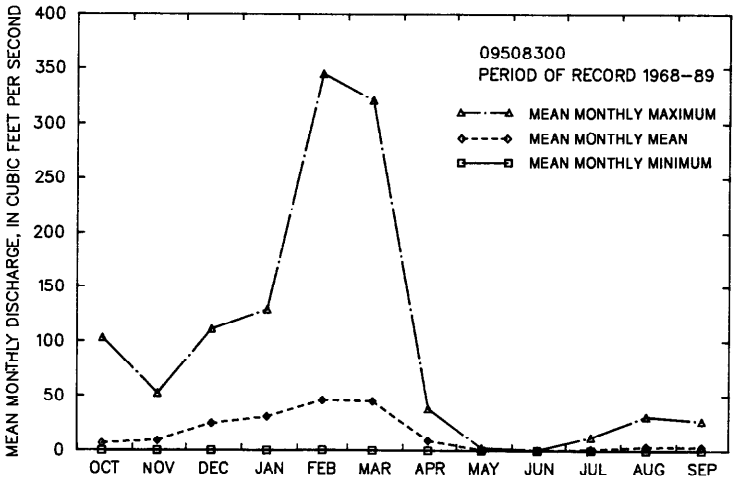
† Reliability of values in column is uncertain, and potential errors are large.


09508300
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1955
1960
1965
1970
1975
1980
1985
1990
1995


09508300
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
MEDIAN
50
45
40
35
30
25
20
15
10
5
0
1955
1960
1965
1970
1975
1980
1985
1990
1995

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ--CONTINUED





095085000 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ

LOCATION.--Lat 34°04'23", long 111°42'56", in sec.35, T.9.N., R.6 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.3 mi downstream from Tangle Creek, and 9 mi upstream from Horseshoe Dam.

DRAINAGE AREA.--5,859 mi^2, of which 365 mi^2 is noncontributing including 357 mi^2 in Aubrey Valley Playa, a closed basin.

REMARKS.-- About 12,500 acres above station are irrigated by surface water and ground water. Low flow slightly regulated by powerplant 32 mi above station, using water from Fossil Creek. This station is above all major reservoirs on Verde River.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1000	00-00-00	[1]180,000	ES,PF	1955	08-23-55	11,600	
1760	00-00-00	[1]130,000	ES,PF	1956	07-31-56	12,800	
1891	02-24-91	[2]150,000	ES,HP	1957	01-10-57	14,500	
1906	11-27-05	[3]96,000	ES,HP	1958	03-23-58	21,100	
1916	01-20-16	68,900	ES,HP	1959	08-17-59	6,060	
1920	02-22-20	[4]95,000	ES,HP	1960	12-26-59	23,400	
1925	09-17-25	20,000	ES	1961	08-23-61	2,800	
1926	04-06-26	32,000	ES	1962	02-13-62	13,300	
1927	02-17-27	70,000	ES	1963	08-22-63	18,900	
1928	02-05-28	14,000	ES	1964	08-27-64	6,910	
1929	04-05-29	26,000	ES	1965	01-07-65	25,700	
1930	08-09-30	8,100	ES	1966	12-22-65	39,300	
1931	02-14-31	34,000	ES	1967	12-07-66	53,000	
1932	02-09-32	53,000	ES	1968	12-19-67	32,600	
1933	03-13-33	1,660	ES	1969	01-26-69	45,800	
1934	08-25-34	3,300	ES	1970	09-06-70	61,900	
1935	02-07-35	14,300	ES	1971	08-03-71	3,030	
1936	02-24-36	12,000	ES	1972	12-27-71	21,100	
1937	02-07-37	63,000	ES	1973	10-20-72	63,400	
1938	03-04-38	[3]100,000	ES	1974	08-02-74	1,500	
1939	09-14-39	17,700	ES	1975	04-15-75	5,420	
1940	02-27-40	5,020	ES	1976	02-10-76	39,900	
1941	03-14-41	43,800	ES	1977	08-24-77	1,620	
1942	10-14-41	3,510	ES	1978	03-01-78	91,400	
1943	08-14-43	16,600	ES	1979	12-19-78	94,000	
1944	03-14-44	7,530	ES	1980	02-15-80	94,800	
1945	03-16-45	9,710	ES	1981	04-06-81	2,030	
1946	04-08-46	8,660		1982	03-12-82	42,100	
1947	09-19-47	11,500		1983	12-23-82	22,400	
1948	03-25-48	2,560		1984	10-01-83	27,200	
1949	01-13-49	11,000		1985	12-28-84	19,300	
1950	10-19-49	9,330		1986	11-30-85	10,300	
1951	08-30-51	16,400		1987	03-10-87	5,000	
1952	12-31-51	81,600		1988	02-03-88	19,800	
1953	08-29-53	6,390		1989	02-05-89	2,670	
1954	03-23-54	19,700					

[1]Ely and Baker (1985).
[2]Highest since 1888.
[3]Highest since 1891.
[4]Highest since 1906.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
16.2	209	5,470	67.0	2.4	18.4	2.1	4.2

09508500 VERDE RIVER BELOW TANGLE CREEK ABOVE HORSESHOE DAM, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1946-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4,190	155	353	622	1.8	5.2
NOVEMBER	1,380	192	383	315	0.82	5.7
DECEMBER	4,640	227	803	1,080	1.3	11.9
JANUARY	2,710	224	655	639	0.98	9.7
FEBRUARY	11,000	220	1,060	1,720	1.6	15.8
MARCH	10,400	194	1,460	1,830	1.3	21.7
APRIL	5,640	155	878	1,090	1.2	13.0
MAY	1,320	113	219	186	0.85	3.3
JUNE	316	83	134	43	0.32	2.0
JULY	430	76	181	73	0.41	2.7
AUGUST	1,180	127	334	215	0.64	5.0
SEPTEMBER	1,460	99	271	225	0.83	4.0
ANNUAL	1,710	189	559	382	0.68	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	90	74	68	64	59	57
3	93	77	71	66	62	59
7	97	80	74	69	64	61
14	102	84	77	72	67	63
30	110	91	83	77	71	67
60	127	105	96	89	81	77
90	145	121	110	102	93	88
120	173	146	132	120	108	99
183	197	172	165	161	158	157

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1000, 1925-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
16,000	39,400	61,300	96,500	128,000	164,000

WEIGHTED SKEW (LOGS)= -0.26
MEAN (LOGS)= 4.18
STANDARD DEV. (LOGS)= 0.48

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-89

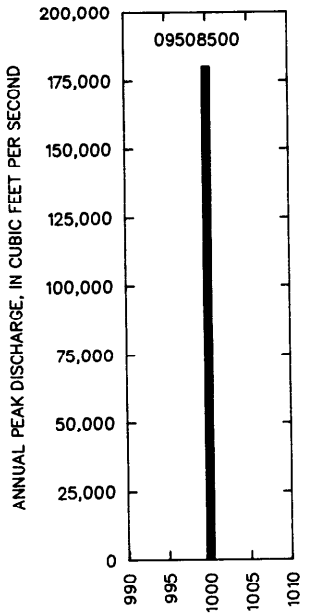
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	8,220	23,100	38,700	65,900	92,000	123,000
3	5,660	15,000	24,300	39,900	54,400	71,500
7	3,630	8,960	14,100	22,300	29,900	38,500
15	2,420	5,500	8,320	12,800	16,800	21,300
30	1,680	3,620	5,390	8,190	10,700	13,600
60	1,150	2,430	3,640	5,630	7,510	9,760
90	951	1,960	2,890	4,430	5,860	7,570

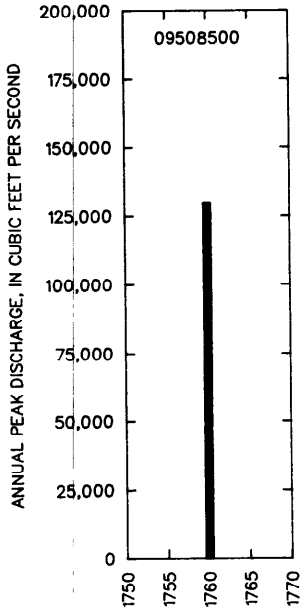
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-89

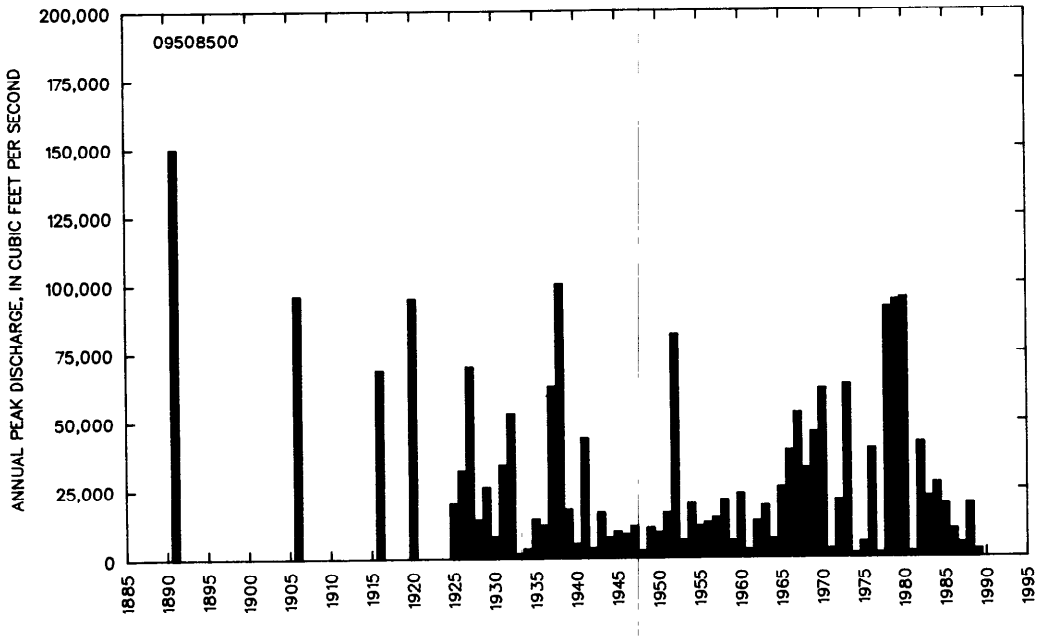
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
5,960	2,020	917	558	408	309	264	238	211	180	151	120	103	87	79	75	64

† Reliability of values in column is uncertain, and potential errors are large.

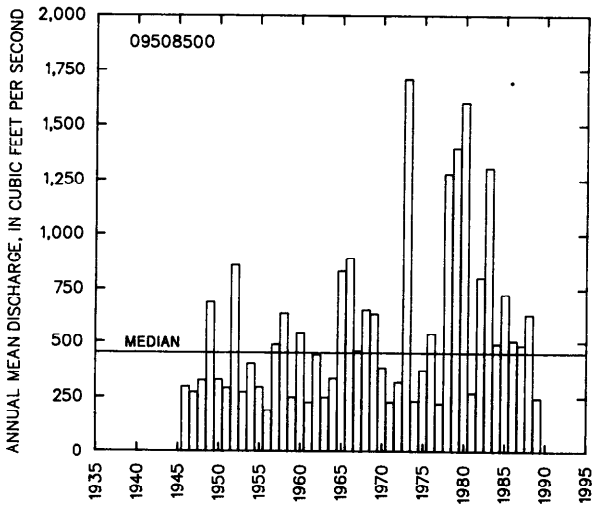
09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--CONTINUED

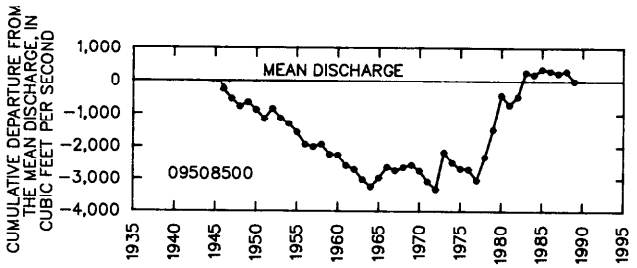


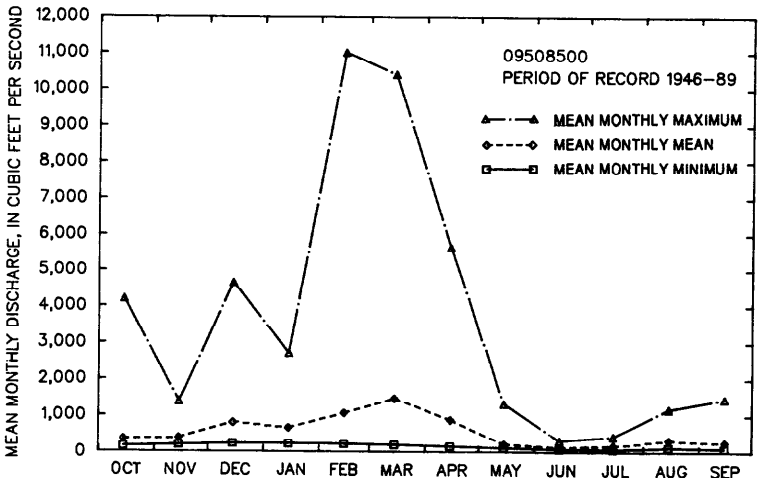




09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--CONTINUED







09510070 WEST FORK SYCAMORE CREEK ABOVE MCFARLAND CANYON, NEAR SUNFLOWER, AZ

LOCATION.--Lat 33°57'38", long 111°29'12", in SE¼SW¼ sec.12, T.7 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on left bank 0.2 mi upstream from McFarland Canyon, and 6.8 mi north of Sunflower.

DRAINAGE AREA.--4.58 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	12-22-65	[1]430
1967	12-07-66	13
1968	12-19-67	152
1969	02-25-69	10
1970	09-05-70	[1]1,700
1971	11-30-70	0.3
1972	06-22-72	0.3
1973	10-07-72	185
1974	08-05-74	6.6
1978	03-01-78	[2]720
1983	11-30-82	178
1984	10-01-83	21
1985	12-27-84	97
1986	11-30-85	12

[1]Highest since 1959.
[2]Highest since 1970.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
260	3.8	5,430	1.3	3.0	24.5	3.0	5.5

09510070 WEST FORK SYCAMORE CREEK ABOVE MCFARLAND CANYON, NEAR SUNFLOWER AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-74, 1983-85

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	4.3	0.00	0.53	1.2	2.4	3.7
NOVEMBER	2.7	0.00	0.44	0.84	1.9	3.1
DECEMBER	17	0.00	3.4	4.9	1.5	23.7
JANUARY	7.1	0.01	1.9	2.1	1.1	13.4
FEBRUARY	13	0.04	3.2	4.4	1.4	22.4
MARCH	12	0.04	2.8	4.3	1.5	19.6
APRIL	6.6	0.03	1.1	1.9	1.7	7.6
MAY	1.3	0.01	0.32	0.44	1.4	2.3
JUNE	0.39	0.00	0.07	0.12	1.5	0.5
JULY	0.12	0.00	0.02	0.04	1.9	0.1
AUGUST	0.10	0.00	0.02	0.03	1.5	0.1
SEPTEMBER	5.5	0.00	0.48	1.6	3.3	3.4
ANNUAL	3.6	0.02	1.2	1.3	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-74, 1984-86

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.01	0.00	0.00	0.00	0.00	0.00
183	0.02	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1966-74, 1978, 1983-86

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
36	268	702	1,840	3,330	5,530

WEIGHTED SKEW (LOGS)= -0.37
MEAN (LOGS)= 1.49
STANDARD DEV. (LOGS)= 1.10

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-74, 1983-85

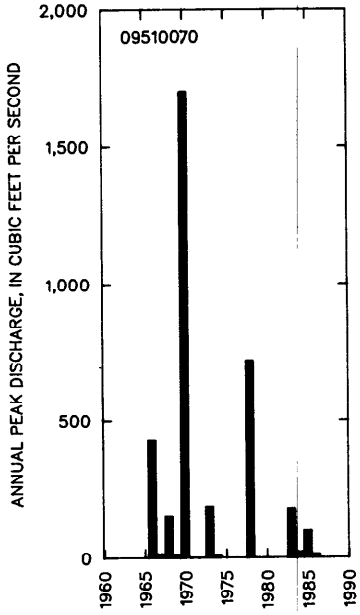
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	17	85	160	270	352	429
3	11	51	91	145	183	217
7	7.2	29	49	76	94	111
15	4.6	18	32	51	66	80
30	3.3	12	21	35	45	55
60	2.3	8.8	16	28	38	49
90	1.8	6.7	12	20	27	35

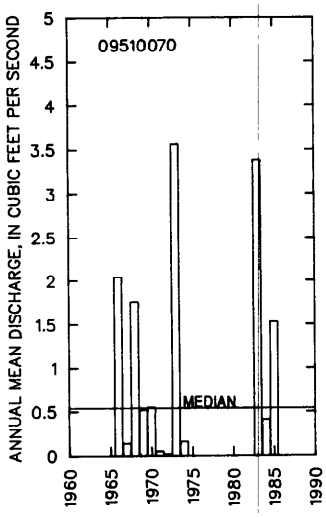
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-74, 1983-85

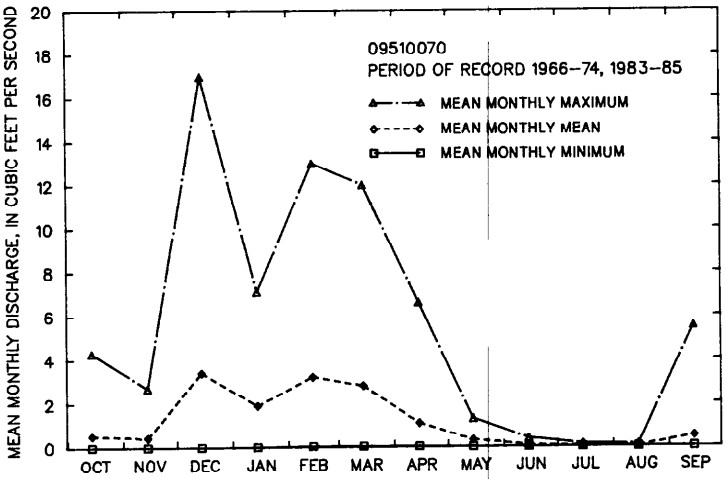
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
21	5.3	2.4	1.5	0.93	0.25	0.12	0.07	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09510070 WEST FORK SYCAMORE CREEK ABOVE MCFARLAND CANYON, NEAR SUNFLOWER, AZ--CONTINUED







09510080 WEST FORK SYCAMORE CREEK NEAR SUNFLOWER, AZ

LOCATION.--Lat 33°56'45", long 111°29'05", in SE¼ sec.13, T.7 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.2 mi upstream from confluence with East Fork, and 5.7 mi north of Sunflower.

DRAINAGE AREA.--9.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	01-25-62	52	
1963	02-11-63	116	
1964	03-24-64	5.6	
1965	04-10-65	90	
1966	12-22-65	[1]698	
1967	12-07-66	18	
1968	12-19-67	364	
1969	02-25-69	25	
1970	09-05-70	[1]3,480	
1971	12-22-70	1.2	
1972	06-22-72	4.4	
1973	10-07-72	448	
1974	01-09-74	30	
1978	03-02-78	660	HP
1979	01-17-79	463	HP

[1]Highest since 1959.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
353	3.9	5,260	0.8	3.0	24.5	2.9	5.5

09510080 WEST FORK SYCAMORE CREEK NEAR SUNFLOWER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1962-74

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	14	0.00	1.1	3.8	3.5	4.4
NOVEMBER	8.0	0.00	0.70	2.2	3.2	2.8
DECEMBER	33	0.01	4.7	9.7	2.1	19.1
JANUARY	21	0.03	3.4	5.8	1.7	13.7
FEBRUARY	21	0.05	4.6	7.0	1.5	18.5
MARCH	32	0.08	5.4	8.8	1.6	22.0
APRIL	16	0.04	2.8	5.5	2.0	11.4
MAY	2.1	0.02	0.36	0.55	1.5	1.5
JUNE	0.55	0.01	0.07	0.15	2.0	0.3
JULY	0.15	0.00	0.02	0.04	2.3	0.1
AUGUST	5.5	0.00	0.44	1.5	3.4	1.8
SEPTEMBER	11	0.00	1.1	3.1	2.9	4.3
ANNUAL	8.9	0.04	2.0	2.6	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1963-74

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.02	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1962-74, 1978-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
101	519	1,190	2,840	4,920	8,030

WEIGHTED SKEW (LOGS)= -0.13
MEAN (LOGS)= 1.99
STANDARD DEV. (LOGS)= 0.86

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1962-74

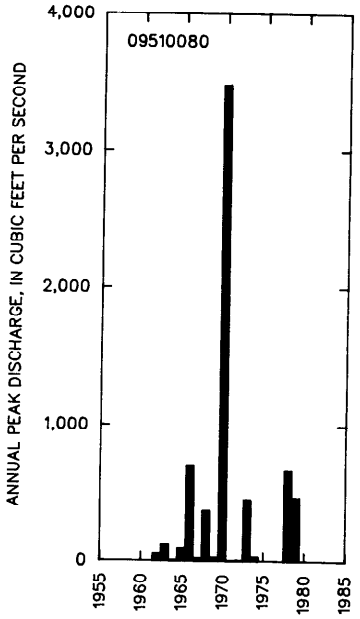
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	29	140	270	489	677	877
3	19	82	149	251	332	412
7	12	50	89	148	194	239
15	8.0	32	59	100	135	171
30	5.6	23	43	78	110	145
60	3.6	15	29	56	82	114
90	2.7	11	21	40	59	83

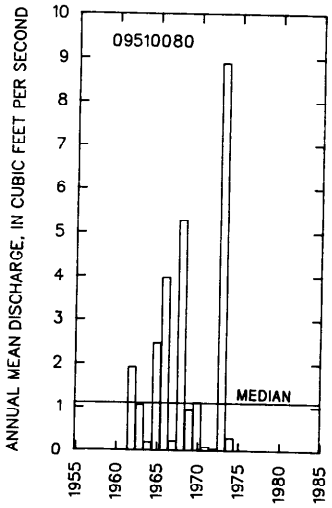
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1962-74

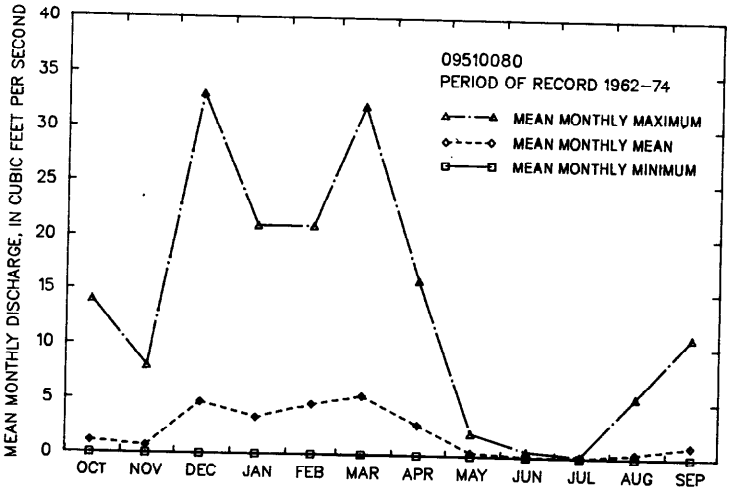
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
39	9.3	3.1	1.7	0.79	0.31	0.15	0.07	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09510080 WEST FORK SYCAMORE CREEK NEAR SUNFLOWER, AZ--CONTINUED







09510100 EAST FORK SYCAMORE CREEK NEAR SUNFLOWER, AZ

LOCATION.--Lat 33°56'58", long 111°27'39", in NE¼SE¼ sec. 18, T.7 N., R.9 E., Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on left bank 1.7 mi upstream from confluence with West Fork, and 6.0 mi north of Sunflower.

DRAINAGE AREA.--4.49 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1961	09-08-61	15		1974	01-09-74	6.1	
1962	01-25-62	11		1975	04-10-75	7.6	
1963	09-01-63	30		1976	02-09-76	150	
1964	11-21-63	0.8		1977	01-03-77	4.8	
1965	04-10-65	31		1978	03-02-78	550	
1966	12-22-65	330		1979	12-18-78	298	
1967	12-07-66	12		1980	02-19-80	300	
1968	12-19-67	244		1981	05-01-81	16	
1969	01-26-69	19		1982	07-28-82	93	
1970	09-05-70	1,940		1983	11-30-82	157	C
1971	08-03-71	32		1984	12-27-83	64	C
1972	06-22-72	3.8		1985	12-27-84	78	C
1973	10-07-72	125		1986	11-30-85	15	C

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
370	4.3	5,760	0.4	3.0	24.5	3.0	5.5

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-85

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	3.7	0.00	0.25	0.85	3.4	1.9
NOVEMBER	1.7	0.00	0.23	0.50	2.2	1.7
DECEMBER	16	0.00	2.1	4.0	1.9	16.2
JANUARY	11	0.01	1.9	2.9	1.5	14.3
FEBRUARY	24	0.01	3.5	5.8	1.7	26.3
MARCH	20	0.01	3.4	5.5	1.6	25.5
APRIL	5.5	0.01	1.1	1.4	1.3	8.0
MAY	1.3	0.00	0.33	0.42	1.3	2.5
JUNE	0.40	0.00	0.08	0.13	1.6	0.6
JULY	0.30	0.00	0.04	0.07	1.7	0.3
AUGUST	0.27	0.00	0.05	0.08	1.6	0.4
SEPTEMBER	5.3	0.00	0.30	1.2	3.9	2.3
ANNUAL	3.3	0.01	1.1	1.2	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1967-86

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.02	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1961-86

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
43	196	428	978	1,660	2,670

WEIGHTED SKEW (LOGS)= -0.05
MEAN (LOGS)= 1.63
STANDARD DEV. (LOGS)= 0.79

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1966-85

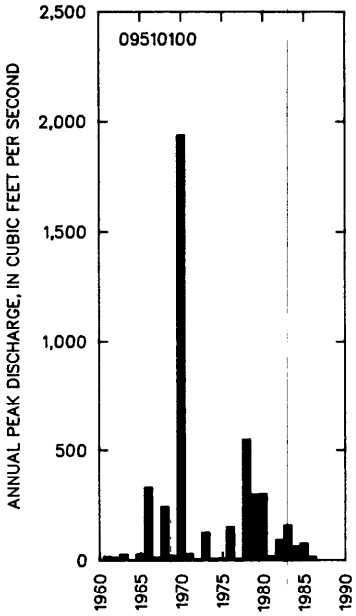
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	20	85	164	306	441	596
3	11	54	105	197	281	376
7	6.6	32	63	118	168	225
15	4.0	20	39	73	104	138
30	2.7	13	25	45	62	80
60	1.9	8.8	17	31	44	57
90	1.5	6.6	12	22	31	40

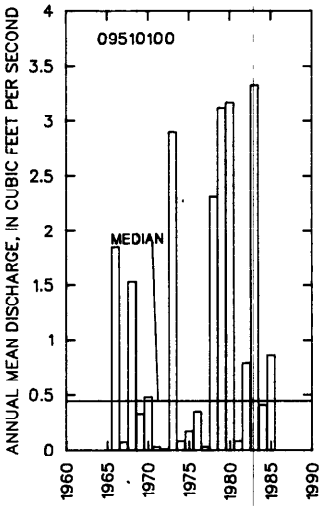
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-85

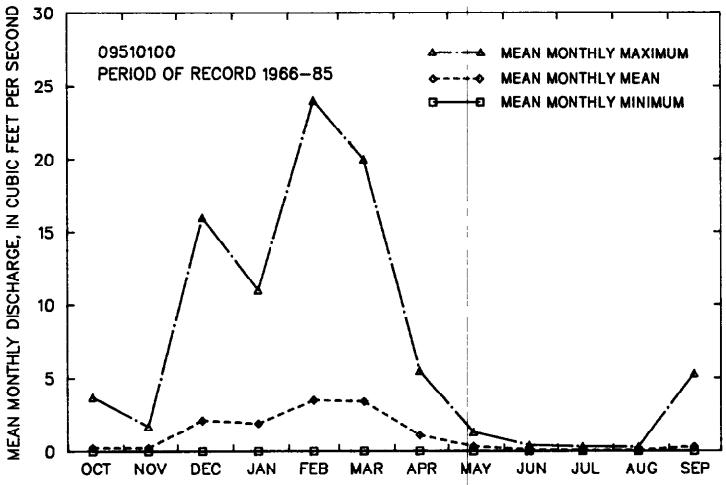
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
21	4.2	1.8	0.92	0.56	0.17	0.08	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09510100 EAST FORK SYCAMORE CREEK NEAR SUNFLOWER, AZ--CONTINUED







09510150 SYCAMORE CREEK NEAR SUNFLOWER, AZ

LOCATION.--Lat 33°51'05", long 111°27'09", in NE¼ sec.20, T.6 N., R.9 E., Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.1 mi upstream from Boulder Creek, 1.2 mi north of Crabtree Butte, and 1.2 mi southeast of Sunflower.

DRAINAGE AREA.--52.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1962	12-16-61	325
1963	02-11-63	1,120
1964	08-12-64	286
1965	04-10-65	762
1966	12-22-65	4,800
1967	09-06-67	550
1968	12-19-67	7,650
1969	01-25-69	142
1970	09-05-70	16,100
1971	08-03-71	395
1972	08-04-72	2,350
1973	10-07-72	3,810
1974	08-05-74	355
1975	03-15-75	69
1976	02-09-76	6,000

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR	
						2-YEAR (IN)	50-YEAR (IN)
58.6	12.4	4,260	0.6	3.0	23.5	3.0	5.5

09510150 SYCAMORE CREEK NEAR SUNFLOWER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1962-76

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	62	0.00	4.4	16	3.6	4.7
NOVEMBER	22	0.10	2.7	6.1	2.3	2.9
DECEMBER	175	0.25	24	52	2.2	26.0
JANUARY	39	0.32	8.5	11	1.3	9.2
FEBRUARY	86	0.38	19	27	1.5	20.1
MARCH	124	0.29	16	32	2.0	17.5
APRIL	55	0.28	9.6	17	1.7	10.4
MAY	14	0.21	2.1	3.3	1.6	2.3
JUNE	3.7	0.13	0.89	1.1	1.3	1.0
JULY	3.5	0.01	0.57	0.91	1.6	0.6
AUGUST	11	0.04	1.7	3.0	1.8	1.8
SEPTEMBER	42	0.00	3.4	11	3.1	3.7
ANNUAL	34	0.52	7.7	9.5	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-76

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.04	0.00	0.00	0.00	0.00	0.00
3	0.05	0.00	0.00	0.00	0.00	0.00
7	0.05	0.00	0.00	0.00	0.00	0.00
14	0.07	0.00	0.00	0.00	0.00	0.00
30	0.08	0.00	0.00	0.00	0.00	0.00
60	0.12	0.06	0.04	0.02	0.02	0.01
90	0.19	0.10	0.07	0.06	0.05	0.04
120	0.26	0.14	0.11	0.08	0.07	0.06
183	0.40	0.26	0.22	0.19	0.17	0.16

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,050	4,050	8,160	17,200	27,800	42,700

WEIGHTED SKEW (LOGS)= -0.02
MEAN (LOGS)= 3.02
STANDARD DEV. (LOGS)= 0.70

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1962-76

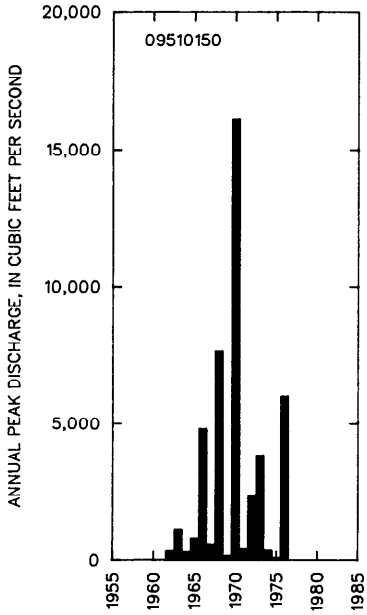
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	195	755	1,550	3,390	5,630	8,930
3	100	377	736	1,480	2,290	3,390
7	59	212	392	730	1,070	1,480
15	34	126	234	435	635	880
30	23	82	151	280	408	565
60	15	52	96	180	266	374
90	11	38	71	132	196	276

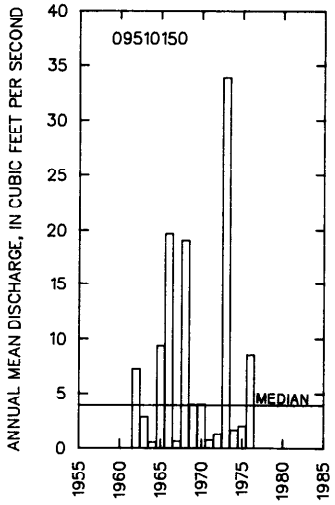
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1962-76

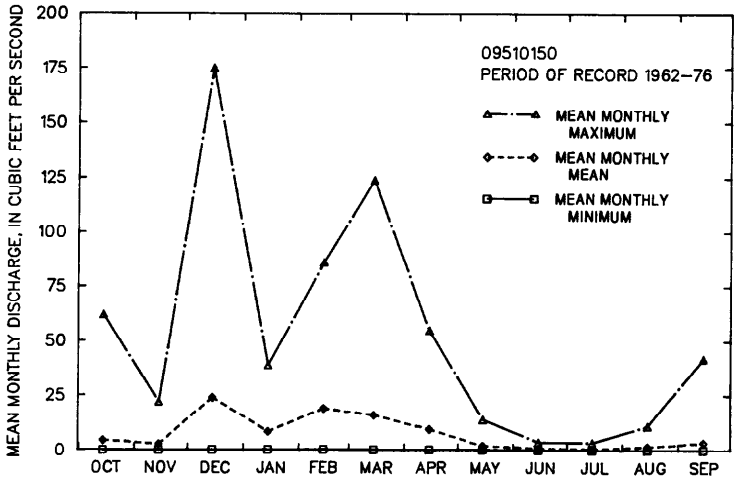
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
139	29	9.4	4.8	2.9	1.3	0.74	0.52	0.37	0.22	0.16	0.09	0.05	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09510150 SYCAMORE CREEK NEAR SUNFLOWER, AZ--CONTINUED







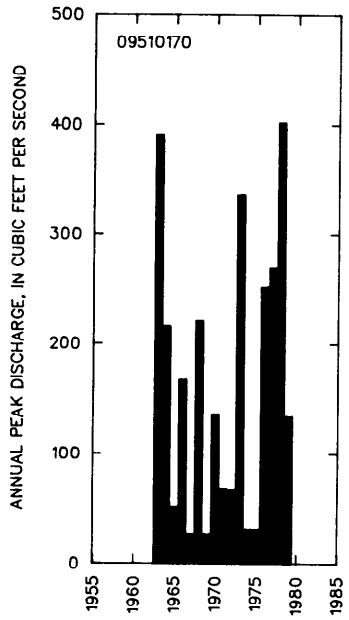
09510170 CAMP CREEK NEAR SUNFLOWER, ARIZ.

LOCATION.--Lat 33°45'35", long 111°29'44", in SW¼ sec.24, T.5 N., R.8 E., Maricopa County, Hydrologic Unit 15060203, on right bank at upstream side of culvert of State Highway 87, 0.5 mi upstream from mouth, and 7 mi south of Sunflower.

DRAINAGE AREA.--2.6 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-16-63	391	
1964	08-02-64	216	
1965	01-07-65	51	
1966	12-22-65	167	
1967	12-07-66	26	
1968	12-18-67	221	
1969	01-27-69	26	
1970	09-05-70	136	
1971	08-19-71	68	
1972	06-22-72	67	
1973	10-19-72	336	
1974	08-08-74	31	
1975	10-29-74	31	
1976	09-26-76	252	
1977	08-16-77	269	
1978	03-02-78	402	
1979	12-18-78	134	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
117	262	390	588	759	950

WEIGHTED SKEW (LOGS)= -0.23
MEAN (LOGS)= 2.05
STANDARD DEV. (LOGS)= 0.43

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
498	4.7	3,520	0.0	3.0	20.0	2.5	5.0

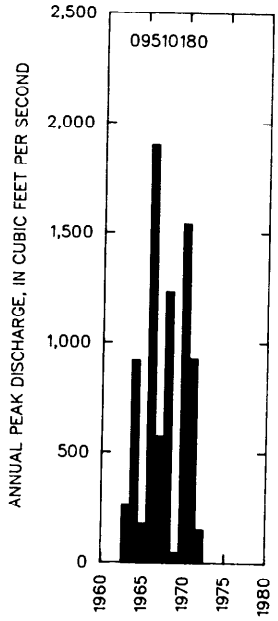
09510180 ROCK CREEK NEAR SUNFLOWER, AZ

LOCATION.--Lat 33°43'49", long 111°30'28", in SE¼ sec.35, T.5 N., R.8 E., Maricopa County, Hydrologic Unit 15060203, on left bank 300 ft upstream from culvert on State Highway 87, 0.3 mi upstream from mouth, and 10 mi south of Sunflower.

DRAINAGE AREA.--15.2 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-16-63	262
1964	08-01-64	916
1965	01-07-65	175
1966	12-22-65	1,900
1967	07-16-67	570
1968	12-19-67	1,230
1969	01-27-69	43
1970	09-05-70	1,540
1971	08-19-71	924
1972	06-22-72	151



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-72

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
507	1,340	2,130	3,400	4,530	5,790

WEIGHTED SKEW (LOGS)= -0.38
MEAN (LOGS)= 2.67
STANDARD DEV. (LOGS)= 0.53

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
412	7.3	3,680	0.2	3.0	16.0	2.3	5.0

09510200 SYCAMORE CREEK NEAR FORT MCDOWELL, AZ

LOCATION.--Lat 33°41'39", long 111°32'28", in sec.16, T.4 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 0.7 mi southwest of Sugarloaf Mountain, 9 mi northeast of Fort McDowell, 10 mi upstream from mouth, and 25 mi northeast of Scottsdale.

DRAINAGE AREA.--164 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1960	12-25-59	15,800	1975	04-11-75	188
1961	07-03-61	248	1976	02-09-76	5,470
1962	12-16-61	674	1977	08-16-77	6,150
1963	08-16-63	2,860	1978	03-02-78	17,900
1964	08-01-64	1,060	1979	12-18-78	9,520
1965	01-07-65	1,170	1980	02-15-80	10,400
1966	12-14-65	668	1981	09-23-81	170
1967	07-16-67	1,060	1982	03-14-82	1,290
1968	12-19-67	9,880	1983	11-30-82	7,440
1969	01-27-69	216	1984	09-02-84	2,600
1970	09-05-70	[1]24,200	1985	12-27-84	2,960
1971	08-19-71	876	1986	03-17-86	3,000
1972	06-22-72	1,810	1987	10-11-86	319
1973	10-19-72	8,540	1988	01-18-88	1,410
1974	08-05-74	1,030	1989	02-05-89	893

[1] Highest since 1959.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
116	30.0	3,820	0.6	2.3	21.2	2.7	5.4

09510200 SYCAMORE CREEK NEAR FORT MCDOWELL, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1961-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	194	0.00	7.9	36	4.5	2.4
NOVEMBER	72	0.00	7.5	17	2.2	2.3
DECEMBER	426	0.00	57	115	2.0	17.2
JANUARY	369	0.00	40	73	1.8	12.0
FEBRUARY	852	0.10	84	168	2.0	25.4
MARCH	881	0.19	89	179	2.0	27.2
APRIL	120	0.07	24	36	1.5	7.3
MAY	52	0.00	7.3	14	1.9	2.2
JUNE	21	0.00	2.6	5.1	2.0	0.8
JULY	7.7	0.00	1.8	2.3	1.3	0.5
AUGUST	26	0.00	3.7	6.1	1.7	1.1
SEPTEMBER	93	0.00	5.3	17	3.2	1.6
ANNUAL	112	0.23	27	37	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1960-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,020	6,650	12,300	23,500	35,500	51,400

WEIGHTED SKEW (LOGS)= -0.07
MEAN (LOGS)= 3.30
STANDARD DEV. (LOGS)= 0.62

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-89

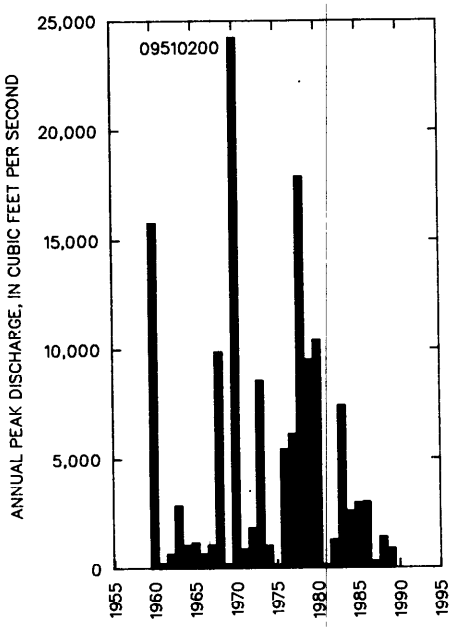
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	558	2,000	3,800	7,390	11,300	16,300
3	327	1,160	2,190	4,220	6,350	9,110
7	189	691	1,310	2,500	3,740	5,320
15	114	421	788	1,480	2,180	3,040
30	73	272	501	912	1,300	1,770
60	47	184	347	642	926	1,260
90	33	133	257	495	738	1,040

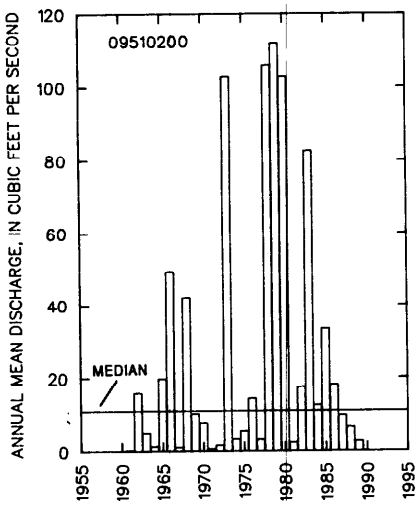
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-89

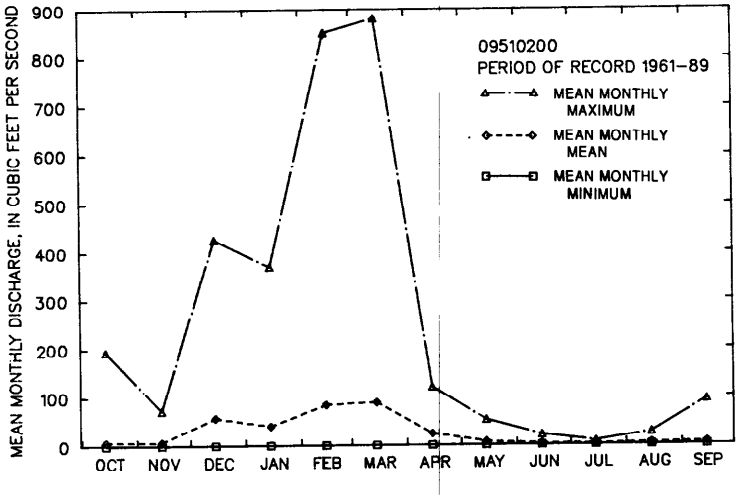
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
448	105	44	22	9.6	3.4	1.5	0.75	0.33	0.12	0.05	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09510200 SYCAMORE CREEK NEAR FORT MCDOWELL, AZ--CONTINUED







09512100 INDIAN BEND WASH AT SCOTTSDALE, AZ

LOCATION.--Lat 33°32'08", long 111°54'50", in NW¼NE¼ sec.11, T.2 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on right bank 100 ft downstream from Arizona Canal.

DRAINAGE AREA.--62 mi^2 approximately, since October 1975. Prior to October 1975, 139 mi^2; reduction caused by cutoff of upper portion of basin by Central Arizona Canal and detention dike (also see REMARKS).

REMARKS.--Natural flow of wash affected by urbanization and partly regulated by artificial lakes upstream. Upper portion of basin (about 77 mi) cut off by Central Arizona Canal and detention dike in October 1975. Release of excess floodwaters may occasionally pass canal into lower portion of basin. Records at present site may include water spilled over emergency spillway along north side of Arizona Canal but do not include water released through the control structure on south side of canal, which enters Indian Bend Wash downstream from the gage.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1943	08-03-43	[1]15,000	HP	1972	06-22-72	[1]21,000	C
1961	09-13-61	745		1973	10-19-72	9,600	C
1962	00-00-62	0		1974	07-31-74	9.4	C
1963	07-19-63	350		1975	11-03-74	20	C
1964	10-19-63	328		1976	09-25-76	3,500	ES,C
1965	02-07-65	76		1977	10-23-76	140	C
1966	09-13-66	596		1978	03-02-78	3,180	C
1967	07-17-67	248		1979	01-17-79	252	C
1968	12-19-67	5,620		1980	02-15-80	125	C
1969	00-00-69	0		1981	07-30-81	450	C
1970	09-05-70	2,150	C	1983	08-16-83	3,830	C
1971	08-10-71	85	C	1984	09-02-84	5,000	C

[1]Highest since 1922.

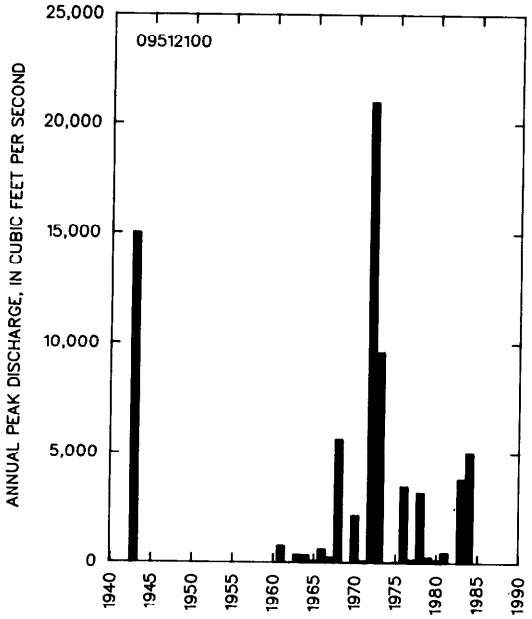
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1943, 1961-70

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
378	1,440	2,950	6,400	10,600	16,800

WEIGHTED SKEW (LOGS)= 0.10
MEAN (LOGS)= 2.59
STANDARD DEV. (LOGS)= 0.68

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
60.0	23.3	1,780	0.0	2.4	10.9	1.7	3.7

09512200 SALT RIVER TRIBUTARY IN SOUTH MOUNTAIN PARK, AT PHOENIX, AZ

LOCATION.--Lat 33°20'49", long 112°05'03", in NE¼NE¼ sec.18, T.1 S., R.3 E., Maricopa County, Hydrologic Unit 15060106, in South Mountain Park, on left bank 6.5 mi south of Phoenix main post office.

DRAINAGE AREA.--1.75 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1961	07-22-61	370		1976	09-23-76	70	
1962	00-00-62	0		1977	10-23-76	5.0	
1963	00-00-63	0		1978	12-29-77	86	
1964	10-19-63	530		1979	00-00-79	0	
1965	09-04-65	670		1980	00-00-80	0	
1966	08-18-66	194		1981	00-00-81	0	
1967	09-03-67	12		1982	10-01-81	133	
1968	07-30-68	81		1983	11-30-82	44	
1969	00-00-69	0		1984	07-27-84	644	
1970	09-05-70	77		1985	07-16-85	7.0	ES
1971	00-00-71	0		1986	00-00-86	0	
1972	08-12-72	2.0		1987	00-00-87	0	
1973	11-11-72	147		1988	11-01-87	94	
1974	03-20-74	114		1989	10-14-88	9.2	
1975	10-29-74	3.5					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
244	2.1	1,730	0.0	1.0	9.0	1.6	3.6

09512200 SALT RIVER TRIBUTARY IN SOUTH MOUNTAIN PARK, AT PHOENIX, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1961-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.26	0.00	0.02	0.06	3.2	17.1
NOVEMBER	0.15	0.00	0.01	0.03	3.6	7.4
DECEMBER	0.03	0.00	0.00	0.01	3.5	1.5
JANUARY	0.01	0.00	0.00	0.00	5.4	0.3
FEBRUARY	0.00	0.00	0.00	0.00		0.0
MARCH	0.07	0.00	0.00	0.01	4.2	2.6
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	0.01	0.00	0.00	0.00	5.4	0.3
JULY	0.84	0.00	0.04	0.16	4.0	34.1
AUGUST	0.39	0.00	0.02	0.08	4.1	16.2
SEPTEMBER	0.27	0.00	0.02	0.07	2.9	20.6
ANNUAL	0.07	0.00	0.01	0.02	1.9	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90						
120						
183						

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
22	171	448	1,140	2,000	3,220

WEIGHTED SKEW (LOGS)= -0.49
MEAN (LOGS)= 1.25
STANDARD DEV. (LOGS)= 1.15

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-89

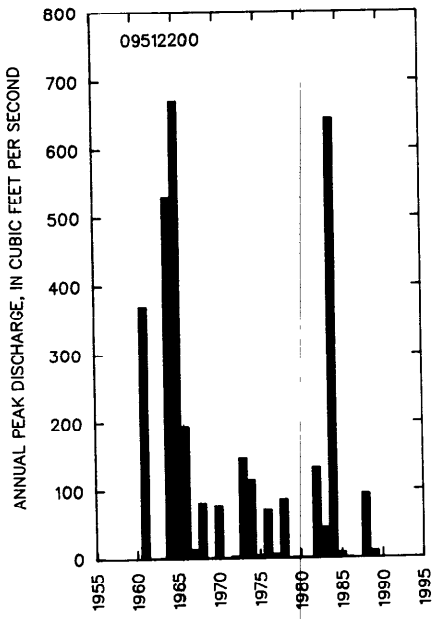
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	0.46	3.3	7.7	16	26	39
3	0.17	1.2	2.7	5.6	8.8	13
7	0.08	0.52	1.1	2.3	3.5	5.1
15	0.03	0.26	0.55	1.1	1.7	2.4
30	0.01	0.15	0.29	0.58	0.84	1.2
60	0.00	0.08	0.16	0.33	0.50	0.75
90	0.00	0.05	0.11	0.22	0.32	0.47

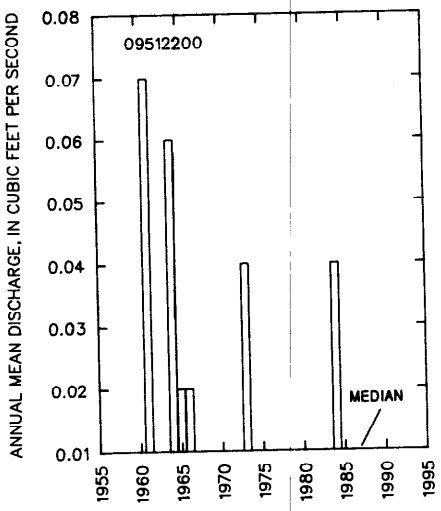
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-89

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

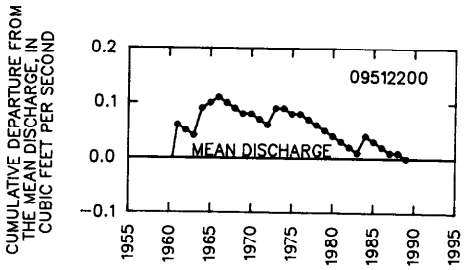
† Reliability of values in column is uncertain, and potential errors are large.

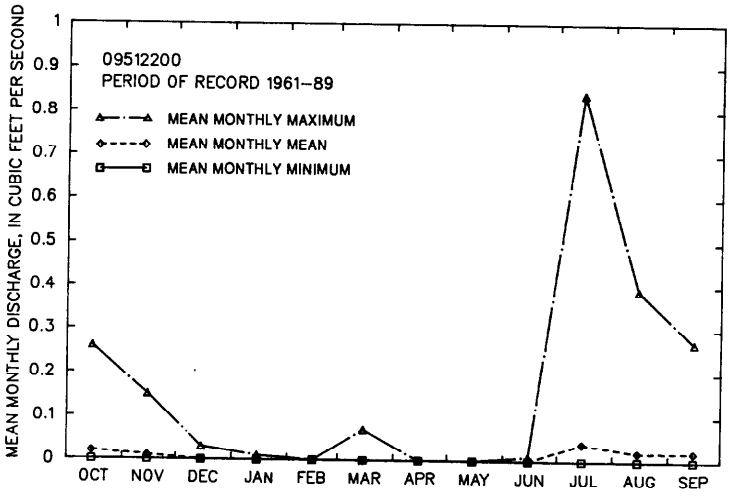
09512200 SALT RIVER TRIBUTARY IN SOUTH MOUNTAIN PARK, AT PHOENIX, AZ--CONTINUED





09512200 SALT RIVER TRIBUTARY IN SOUTH MOUNTAIN PARK, AT PHOENIX, AZ--CONTINUED





09512300 CAVE CREEK NEAR CAVE CREEK, AZ

LOCATION.--Lat 33°47'00", long 112°00'24", in SW¼ sec.12, T.5 N., R.3 E., Maricopa County, Hydrologic Unit 15060106, on left bank, 200 ft upstream from Prescott-to-Mesa transmission line, 5 mi southwest of town of Cave Creek, and 5.0 mi upstream from Cave Creek Dam.

DRAINAGE AREA.--121 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1958	09-12-58	5,680
1959	08-05-59	3,590
1960	10-29-59	8,570
1961	09-17-61	696
1962	12-16-61	280
1963	08-06-63	1,510
1964	08-02-64	3,120
1965	07-16-65	610
1966	12-22-65	6,000
1967	09-06-67	1,800
1968	12-19-67	12,400
1969	00-00-69	0
1970	09-05-70	2,700
1971	08-04-71	364
1972	07-17-72	3,950
1973	10-19-72	3,950
1974	08-05-74	1,390
1975	11-02-74	856
1976	02-09-76	1,260
1977	00-00-77	0
1978	03-02-78	7,500
1979	12-18-78	6,900
1981	00-00-81	0
1982	10-02-81	1,200
1983	03-03-83	1,420
1984	08-09-84	148
1985	12-27-84	910
1986	07-22-86	1,350
1987	00-00-87	0
1988	08-21-88	170
1989	00-00-89	0

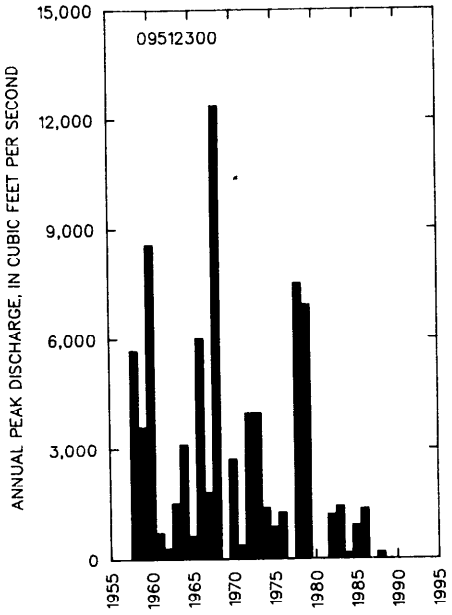
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1958-79, 1981-86

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100†
50%	20%	10%	4%	2%	1%
1,740	4,320	6,870	11,200	15,200	20,000

WEIGHTED SKEW (LOGS)= -0.12
MEAN (LOGS)= 3.23
STANDARD DEV. (LOGS)= 0.48

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
123	18.4	3,470	0.1	1.17	15.7	2.3	4.4

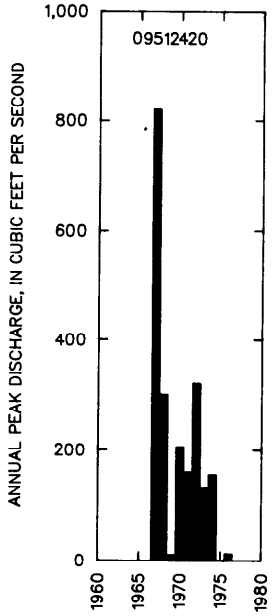
09512420 LYNX CREEK TRIBUTARY NEAR PRESCOTT, AZ

LOCATION.--Lat 34°32'51", long 112°23'58", in SE¼ sec.31, T.14 N., R.1 W., Yavapai County, Hydrologic Unit 15060202, on Walker Road, 400 ft south of State Highway 69, and 4 mi east of Prescott.

DRAINAGE AREA.--0.95 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	00-00-67	820	
1968	00-00-68	300	ES
1969	09-13-69	10	ES
1970	09-04-70	205	
1971	08-00-71	160	
1972	08-00-72	320	
1973	10-07-72	130	
1974	07-20-74	155	
1975	00-00-75	0	
1976	02-09-76	12	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
106	403	761	1,430	2,100	2,910

WEIGHTED SKEW (LOGS)= -0.41
MEAN (LOGS)= 1.97
STANDARD DEV. (LOGS)= 0.74

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
101	2.2	5,900	26.0	1.0	16.0	2.1	4.4

09512500 AGUA FRIA RIVER NEAR MAYER, AZ

LOCATION.--Lat 34°18'55", long 112°03'48", in NW¼SE¼ sec.20, T.11 N., R.3 E., Yavapai County, Hydrologic Unit 15070102, on left bank at Sycamore damsite, 700 ft downstream from Big Bug Creek and 12 mi southeast of Mayer.

DRAINAGE AREA.--585 mi^2.

REMARKS.--Diversions above station for mining and irrigation of about 600 acres. Perry Canal, which previously headed 300 ft above the gage, was washed out on July 11, 1977, and was not rebuilt.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1940	06-26-40	5,920	1965	04-04-65	7,470
1941	03-01-41	13,000	1966	12-22-65	12,100
1942	08-06-42	6,280	1967	08-19-67	6,960
1943	09-25-43	3,500	1968	12-19-67	3,850
1944	09-16-44	3,810	1969	08-07-69	2,490
1945	07-27-45	2,620	1970	09-05-70	19,800
1946	07-22-46	4,930	1971	08-25-71	7,280
1947	08-16-47	1,610	1972	08-12-72	6,800
1948	08-04-48	6,830	1973	10-07-72	10,700
1949	01-13-49	2,460	1974	07-20-74	740
1950	07-17-50	2,170	1975	07-27-75	2,190
1951	08-28-51	8,180	1976	02-09-76	9,700
1952	01-18-52	7,500	1977	08-23-77	5,480
1953	07-08-53	5,510	1978	03-01-78	9,900
1954	09-03-54	4,570	1979	12-18-78	18,300
1955	08-03-55	12,800	1980	02-19-80	33,100
1956	07-25-56	6,880	1981	09-23-81	2,850
1957	08-13-57	2,710	1982	09-10-82	3,040
1958	06-21-58	4,620	1983	09-23-83	9,940
1959	08-04-59	9,700	1984	08-14-84	3,620
1960	08-08-60	4,820	1985	12-27-84	2,880
1961	07-22-61	10,200	1986	11-26-85	3,970
1962	09-13-62	2,470	1987	10-11-86	6,070
1963	08-19-63	12,800	1988	08-29-88	25,500
1964	07-24-64	9,000	1989	08-18-89	1,280

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.9	37.5	5,000	3.4	1.3	16.7	2.1	4.3

09512500 AGUA FRIA RIVER NEAR MAYER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1941-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	223	0.14	10	33	3.2	3.7
NOVEMBER	146	0.10	10	25	2.4	3.8
DECEMBER	453	0.08	34	87	2.6	12.6
JANUARY	288	0.07	23	50	2.2	8.5
FEBRUARY	1,180	0.02	53	173	3.3	19.7
MARCH	373	0.01	46	83	1.8	17.2
APRIL	314	0.00	22	58	2.7	8.0
MAY	20	0.03	3.1	5.1	1.6	1.1
JUNE	23	0.01	2.3	3.7	1.7	0.8
JULY	48	0.15	12	13	1.0	4.5
AUGUST	244	0.31	37	52	1.4	13.7
SEPTEMBER	187	0.20	17	36	2.1	6.3
ANNUAL	122	1.5	22	26	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.57	0.19	0.11	0.06	0.03	0.02
90	0.90	0.29	0.16	0.09	0.05	0.03
120	1.9	0.66	0.34	0.19	0.09	0.05
183	4.4	1.6	0.85	0.48	0.24	0.15

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1940-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,920	10,600	14,500	20,500	25,800	31,700

WEIGHTED SKEW (LOGS)= 0.16
MEAN (LOGS)= 3.78
STANDARD DEV. (LOGS)= 0.30

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-89

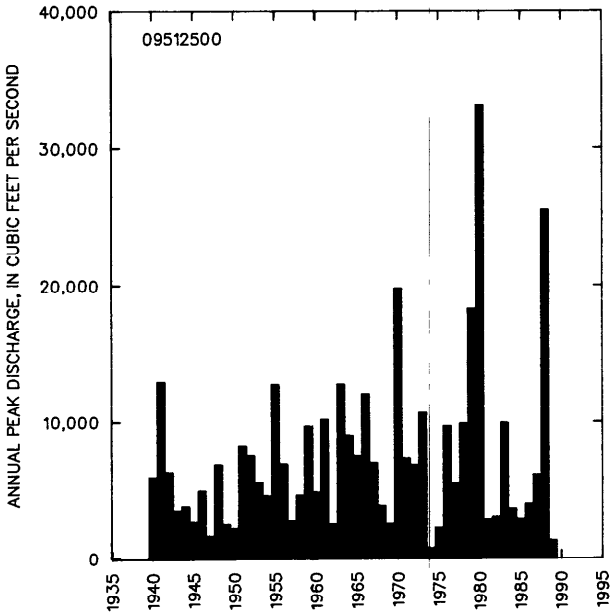
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	793	2,000	3,290	5,670	8,110	11,200
3	388	998	1,680	2,970	4,340	6,150
7	216	564	946	1,660	2,390	3,350
15	130	333	549	943	1,340	1,850
30	83	211	343	574	799	1,070
60	53	134	216	356	489	649
90	38	95	155	258	359	483

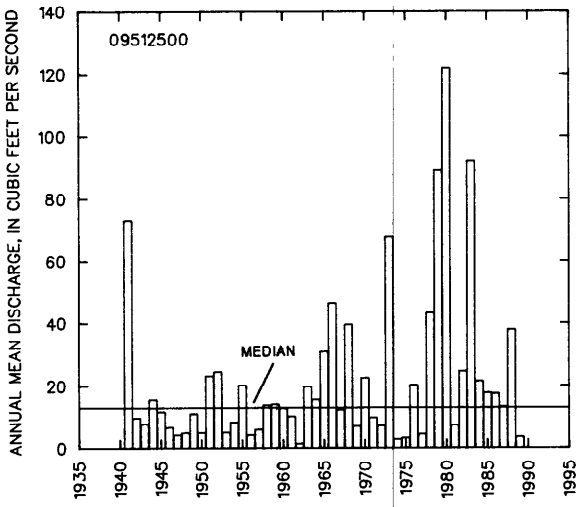
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-89

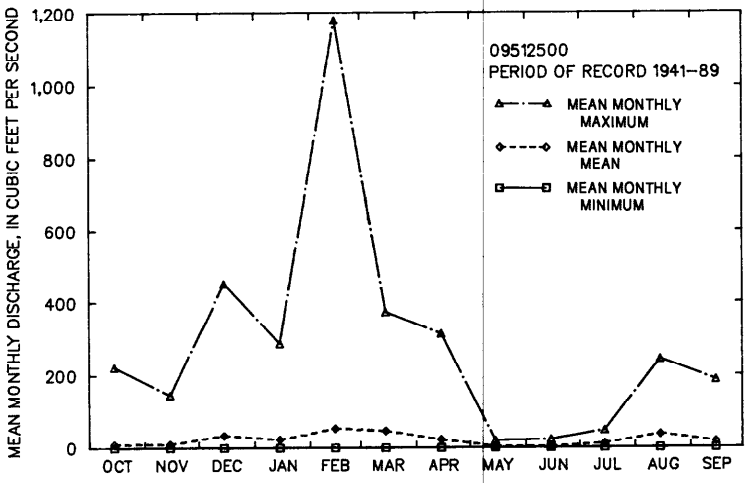
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
393	70	20	10	6.9	4.2	2.8	1.9	1.3	0.81	0.51	0.21	0.14	0.10	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09512500 AGUA FRIA RIVER NEAR MAYER, AZ--CONTINUED







GILA RIVER BASIN

09512600 TURKEY CREEK NEAR CLEATOR, AZ

LOCATION.--34°16'56", long 112°12'25", in SW¼SW¼SE¼ sec.36, T.11 N., R.1 E (unsurveyed), Yavapai County, Hydrologic Unit 15070102, in Prescott National Forest, on right bank 0.7 mi upstream from Forest Route 259, 1.5 mi east of Cleator, and 9.3 mi south of Mayer.

DRAINAGE AREA.--89.4 MI^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1980	02-19-80	5,230
1981	07-31-81	127
1982	08-23-82	1,260
1983	12-09-82	1,840
1984	09-10-84	2,260
1985	12-27-84	648
1986	06-01-86	4,110
1987	10-11-86	530
1988	08-23-88	1,850
1989	12-29-88	1,720

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
122	26.7	5,360	54.0	1.0	20.2	2.2	4.4

09512600 TURKEY CREEK NEAR CLEATOR, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1980-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	7.9	0.00	1.3	2.6	2.0	0.9
NOVEMBER	15	0.00	2.5	4.6	1.8	1.7
DECEMBER	106	0.00	18	33	1.9	11.5
JANUARY	52	0.00	11	16	1.5	7.1
FEBRUARY	420	0.00	61	130	2.1	40.3
MARCH	120	0.76	34	42	1.2	22.1
APRIL	39	0.42	9.8	13	1.3	6.4
MAY	14	0.00	3.2	4.9	1.5	2.1
JUNE	3.5	0.00	0.92	1.3	1.4	0.6
JULY	8.8	0.00	1.3	2.7	2.1	0.8
AUGUST	47	0.06	7.5	15	1.9	4.9
SEPTEMBER	12	0.00	2.4	4.2	1.7	1.6
ANNUAL	47	0.26	12	16	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1981-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
----	----	----	----	----	----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1980-89

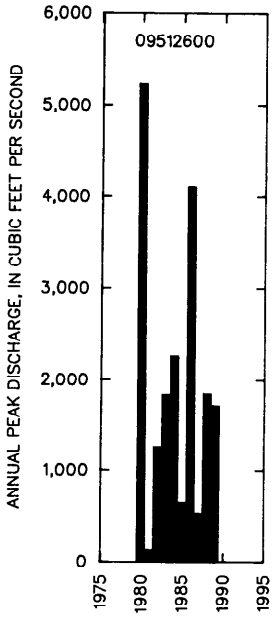
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	320	776	1,120	1,530	1,820	2,080
3	165	478	780	1,250	1,660	2,100
7	89	300	542	984	1,420	1,960
15	56	196	355	643	923	1,260
30	36	127	228	404	568	758
60	23	81	148	267	383	522
90	18	62	111	194	272	361

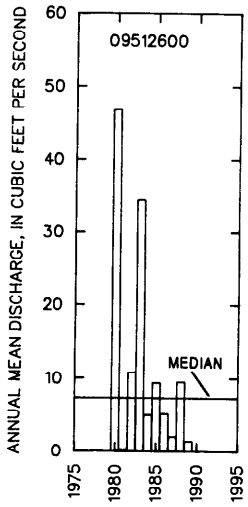
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1980-89

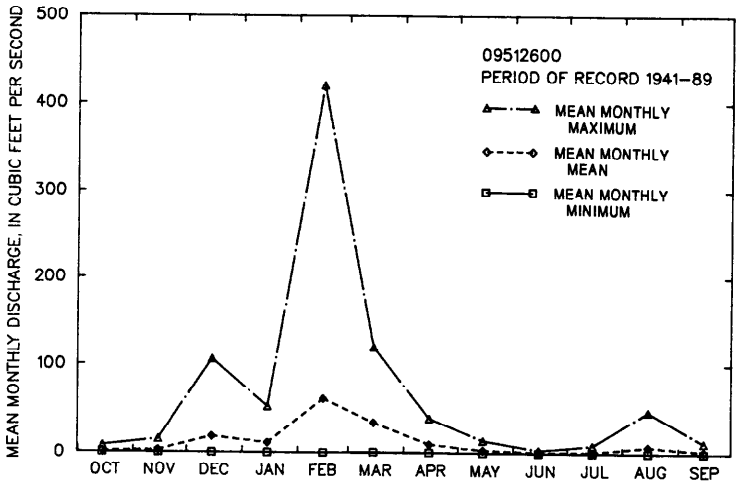
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
223	49	23	13	7.3	2.5	1.0	0.32	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09512600 TURKEY CREEK NEAR CLEATOR, AZ--CONTINUED







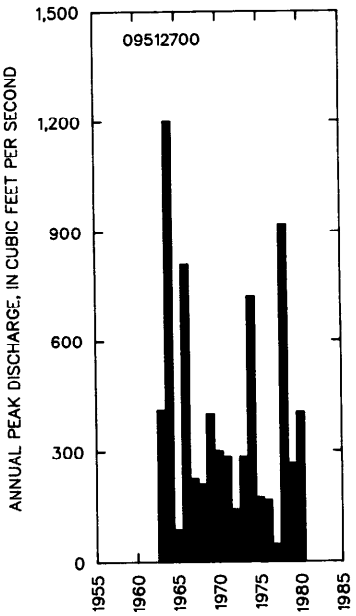
09512700 AGUA FRIA RIVER TRIBUTARY NO. 2 NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 34°02'00", long 112°08'42", in SW¼ sec.15, T.8 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, at State Highway 69, 1 mi south of Rock Springs.

DRAINAGE AREA.--1.07 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-16-63	411
1964	08-02-64	1,200
1965	01-07-65	87
1966	09-13-66	812
1967	11-08-66	225
1968	12-19-67	210
1969	09-05-69	400
1970	07-21-70	300
1971	08-21-71	285
1972	07-17-72	140
1973	10-07-72	285
1974	08-02-74	721
1975	07-08-75	175
1976	09-26-76	165
1977	09-27-77	46
1978	03-02-78	920
1979	12-18-78	265
1980	02-00-80	405



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
309	565	781	1,110	1,400	1,730

WEIGHTED SKEW (LOGS)= 0.13
MEAN (LOGS)= 2.50
STANDARD DEV. (LOGS)= 0.31

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CNARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
173	2.1	2,140	0.0	1.0	16.2	2.2	4.3

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 34°00'56", long 112°10'02", in NW¼NW¼ sec.28, T.8 N., R.2 E., Yavapai County, Hydrologic Unit 15070102, on right bank 2.5 mi southwest of Rock Springs and 10 mi upstream from Lake Pleasant.

DRAINAGE AREA.--1,110 mi^2, approximately.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1920	--------	[1]85,000	HP
1970	09-05-70	40,100	
1971	08-25-71	3,750	
1972	08-13-72	2,620	
1973	10-07-72	17,600	
1974	08-02-74	1,900	
1975	07-08-75	2,490	
1976	02-09-76	24,700	
1977	08-24-77	2,390	
1978	03-02-78	39,500	
1979	12-18-78	52,800	
1980	02-19-80	59,500	
1981	09-23-81	1,020	
1982	03-13-82	4,190	
1983	11-30-82	10,200	
1984	08-17-84	6,860	
1985	12-28-84	4,560	
1986	11-26-85	3,220	
1987	10-12-86	2,160	
1988	08-29-88	19,200	
1989	08-18-89	562	

[1]Highest since 1891.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
61.2	47.4	4,770	3.6	1.0	16.6	2.3	4.4

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1975-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	69	0.12	10	18	1.7	1.0
NOVEMBER	176	0.11	33	54	1.7	3.0
DECEMBER	943	0.10	130	275	2.1	12.0
JANUARY	751	0.22	121	220	1.8	11.2
FEBRUARY	3,320	0.66	368	840	2.3	34.0
MARCH	1,970	0.51	283	514	1.8	26.1
APRIL	178	0.21	55	59	1.1	5.1
MAY	71	0.08	15	22	1.4	1.4
JUNE	46	0.00	6.2	12	1.9	0.6
JULY	36	0.39	13	12	0.92	1.2
AUGUST	164	0.35	29	47	1.6	2.7
SEPTEMBER	160	0.30	19	40	2.1	1.8
ANNUAL	355	2.6	89	109	1.2	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1976-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	1.7	0.38	0.14	0.05	0.01	0.01
90	2.3	0.61	0.25	0.11	0.04	0.02
120	4.1	1.2	0.55	0.26	0.10	0.05
183	7.2	2.3	1.1	0.53	0.22	0.12

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1920, 1970-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
6,610	21,200	39,700	78,200	122,000	182,000

WEIGHTED SKEW (LOGS)= 0.11
MEAN (LOGS)= 3.83
STANDARD DEV. (LOGS)= 0.60

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1975-89

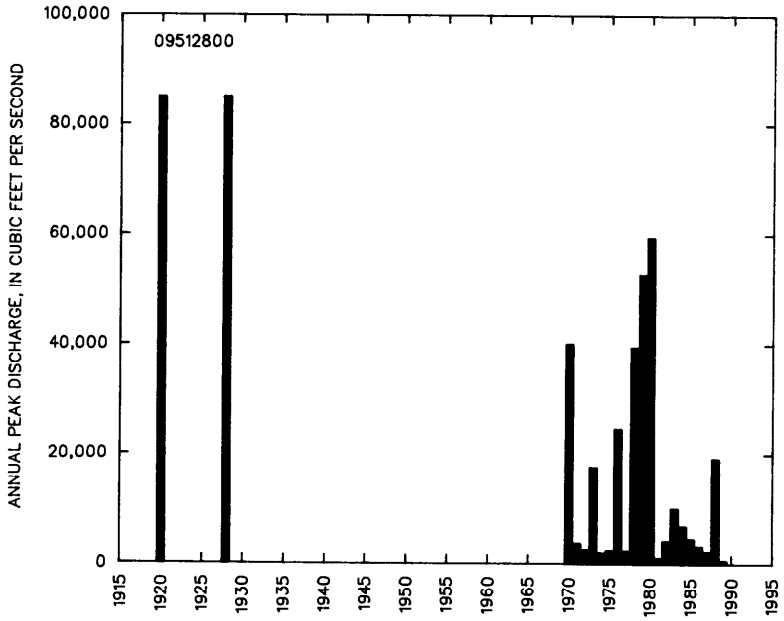
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,710	7,090	14,900	32,700	54,400	85,800
3	910	4,170	9,130	20,900	35,500	57,000
7	562	2,570	5,580	12,600	21,100	33,400
15	324	1,480	3,190	7,090	11,700	18,300
30	197	855	1,820	4,000	6,630	10,400
60	132	561	1,170	2,550	4,160	6,440
90	100	414	851	1,800	2,900	4,410

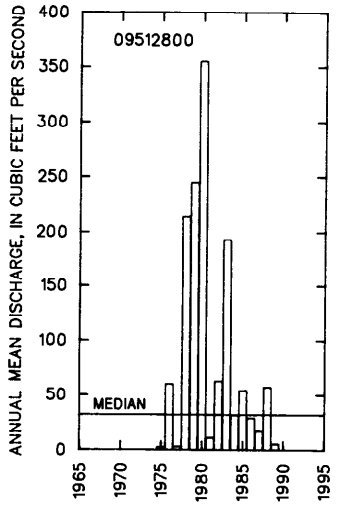
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1975-89

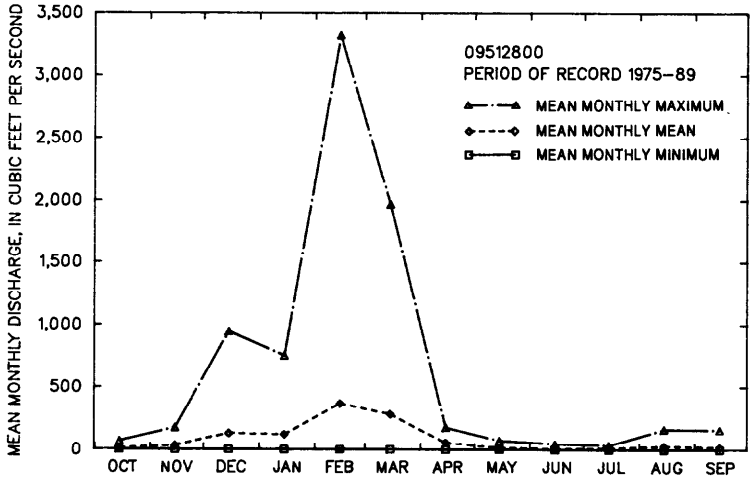
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,500	269	121	70	40	15	8.1	4.6	2.7	1.9	0.87	0.43	0.17	0.11	0.10	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ--CONTINUED







09513780 NEW RIVER NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 33°58'27", long 112°05'54", in SW¼SW¼ sec.6, T.7 N., R.3 E., Maricopa County, Hydrologic Unit 15070102, on right bank 180 ft upstream from road crossing and 6 mi southeast of Rock Springs.

DRAINAGE AREA.--67.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1962	09-28-62	1,050	1976	02-09-76	3,230
1963	08-16-63	765	1977	08-16-77	4.0
1964	08-02-64	4,900	1978	03-02-78	13,600
1965	04-04-65	1,510	1979	03-28-79	6,530
1966	12-22-65	4,020	1980	02-19-80	9,350
1967	09-06-67	245	1981	03-06-81	35
1968	12-19-67	10,600	1982	03-15-82	1,760
1969	09-05-69	1,530	1983	11-30-82	12,500
1970	09-05-70	18,600	1984	12-27-83	692
1971	08-03-71	6,320	1985	12-27-84	2,310
1972	08-12-72	231	1986	11-26-85	3,700
1973	12-28-72	1,550	1987	03-03-87	545
1974	08-05-74	68	1988	11-01-87	4,980
1975	11-01-74	1,570	1989	01-05-89	428

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
140	18.6	3,970	0.2	1.0	20.0	2.4	4.6

09513780 NEW RIVER NEAR ROCK SPRINGS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1966-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	32	0.00	1.7	6.5	3.9	1.1
NOVEMBER	52	0.00	7.0	13	1.9	4.4
DECEMBER	218	0.00	32	64	2.0	20.3
JANUARY	180	0.00	21	43	2.0	13.6
FEBRUARY	348	0.00	41	80	2.0	25.9
MARCH	444	0.00	42	95	2.3	26.6
APRIL	26	0.00	4.2	6.7	1.6	2.7
MAY	11	0.00	1.2	2.5	2.1	0.8
JUNE	2.2	0.00	0.22	0.54	2.5	0.1
JULY	6.5	0.00	0.55	1.4	2.6	0.4
AUGUST	15	0.00	1.5	3.7	2.5	0.9
SEPTEMBER	104	0.00	5.1	21	4.2	3.2
ANNUAL	55	0.00	13	17	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
2,170	6,260	10,600	18,200	25,600	34,600

WEIGHTED SKEW (LOGS)= -0.22
MEAN (LOGS)= 3.32
STANDARD DEV. (LOGS)= 0.56

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1966-89

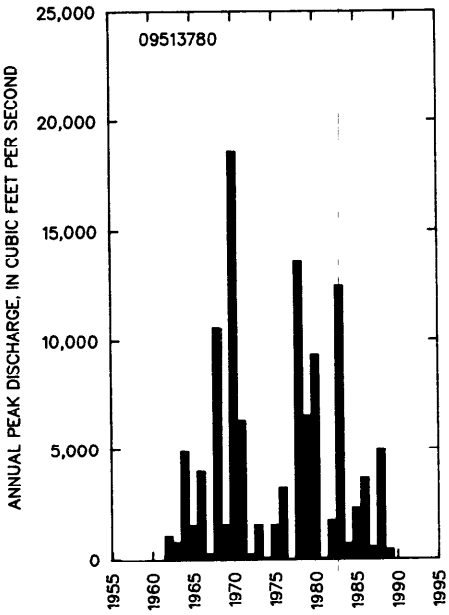
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	424	1,940	3,480	5,690	7,310	8,800
3	208	962	1,720	2,760	3,500	4,170
7	113	537	958	1,530	1,920	2,270
15	65	303	530	821	1,010	1,170
30	40	178	306	466	570	655
60	23	102	190	332	454	586
90	17	74	136	235	320	409

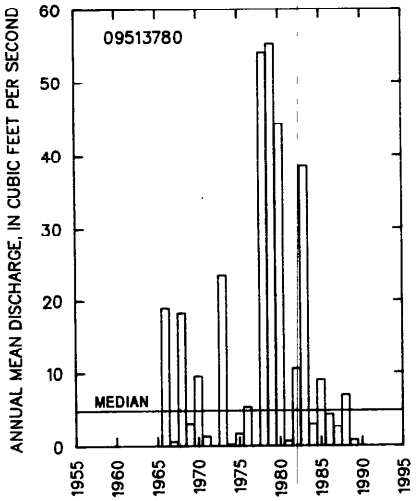
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-89

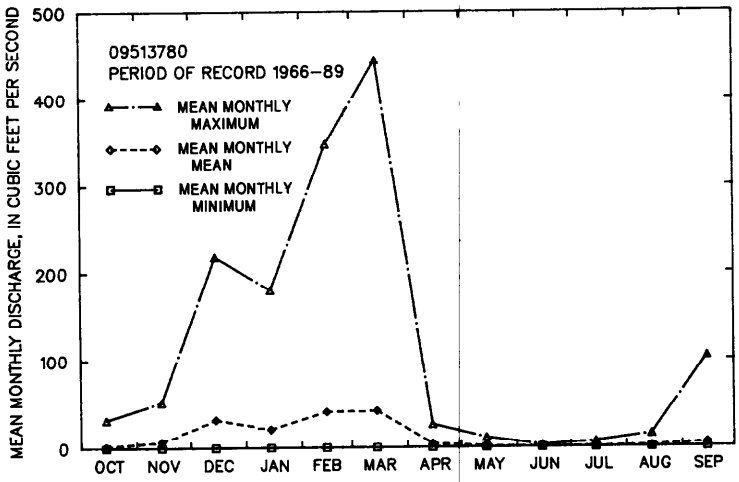
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
236	28	11	5.0	2.8	0.88	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09513780 NEW RIVER NEAR ROCK SPRINGS, AZ--CONTINUED







09513800 NEW RIVER AT NEW RIVER, AZ

LOCATION.--Lat 33°54'41", long 112°08'26", in NW¼NE¼ sec.34, T.7 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, near center of downstream side of bridge on east frontage road of Interstate Highway 17, 0.5 mi southwest of village of New River, and 10 mi south of Rock Springs.

DRAINAGE AREA.--83.3 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1961	07-22-61	325	1972	08-12-72	525
1962	09-28-62	1,430	1973	02-11-73	4,250
1963	08-16-63	4,620	1974	08-05-74	49
1964	08-02-64	4,380	1975	11-02-74	2,280
1965	04-04-65	1,990	1976	02-09-76	7,050
1966	12-22-65	4,180	1977	08-17-77	805
1967	08-10-67	1,420	1978	03-02-78	18,000
1968	12-19-67	12,600	1979	12-18-78	5,560
1969	09-05-69	1,310	1980	02-19-80	14,900
1970	09-05-70	19,500	1981	09-23-81	20
1971	08-21-71	5,090	1982	10-01-81	2,510

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
105	25.9	3,600	0.2	1.0	19.5	2.3	4.6

09513800 NEW RIVER AT NEW RIVER, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1961-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	35	0.00	2.1	7.5	3.5	1.3
NOVEMBER	44	0.00	4.4	11	2.4	2.6
DECEMBER	207	0.00	28	65	2.3	16.6
JANUARY	310	0.00	28	73	2.6	16.8
FEBRUARY	523	0.00	46	114	2.5	27.4
MARCH	443	0.00	40	99	2.5	24.1
APRIL	74	0.00	6.7	16	2.4	4.0
MAY	22	0.00	1.6	4.9	3.1	0.9
JUNE	0.90	0.00	0.11	0.25	2.2	0.1
JULY	2.9	0.00	0.40	0.77	1.9	0.2
AUGUST	25	0.00	3.8	6.8	1.8	2.3
SEPTEMBER	115	0.00	6.3	24	3.8	3.8
ANNUAL	74	0.01	14	21	1.5	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.18	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
3,150	7,880	12,600	20,600	28,300	37,500

WEIGHTED SKEW (LOGS)= -0.09
MEAN (LOGS)= 3.49
STANDARD DEV. (LOGS)= 0.48

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	410	1,980	3,800	6,790	9,310	11,900
3	179	969	1,970	3,730	5,310	7,020
7	93	544	1,150	2,240	3,250	4,360
15	50	304	648	1,280	1,860	2,500
30	28	174	377	754	1,100	1,490
60	16	109	243	499	742	1,020
90	12	79	174	355	524	712

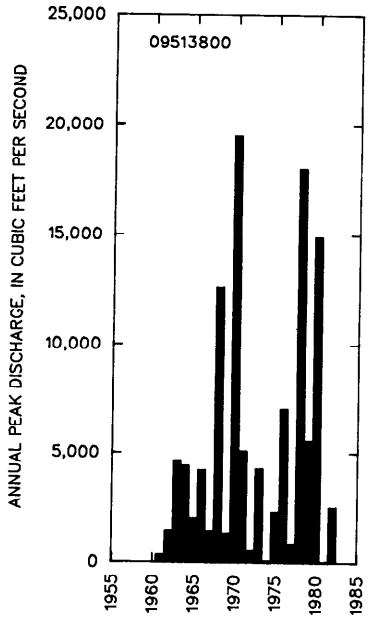
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-82

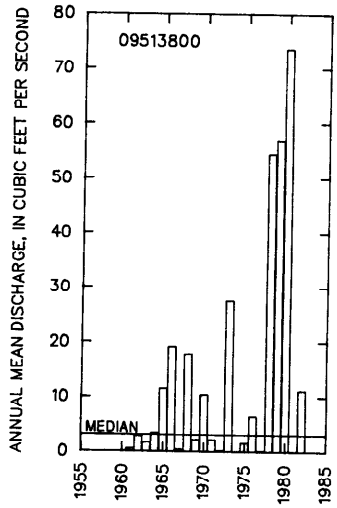
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

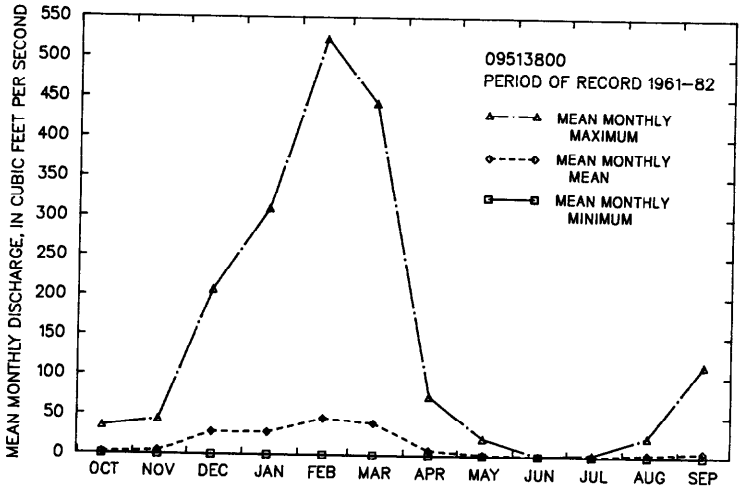
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
298	30	7.4	1.9	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09513800 NEW RIVER AT NEW RIVER, AZ--CONTINUED







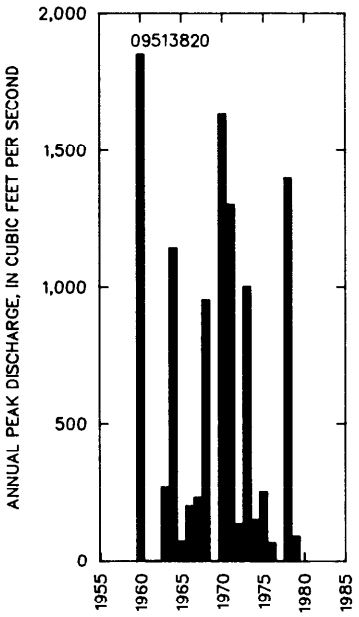
09513820 DEADMAN WASH NEAR NEW RIVER, AZ

LOCATION.--Lat 33°50'30", long 112°08'40", in NW¼ sec.27, T.6 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, at State Highway 69, 4.5 mi south of New River.

DRAINAGE AREA.--11.1 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	12-25-59	1,850	
1961	00-00-61	0	
1962	00-00-62	0	
1963	08-00-63	270	
1964	07-30-64	1,140	
1965	04-04-65	70	ES
1966	12-22-65	200	ES
1967	09-00-67	230	
1968	12-19-67	950	
1969	00-00-69	0	
1970	09-05-70	1,630	
1971	08-21-71	1,300	
1972	07-17-72	135	
1973	10-07-72	1,000	ES
1974	09-19-74	150	
1975	10-28-74	250	ES
1976	08-31-76	64	
1977	00-00-77	0	
1978	03-02-78	1,400	
1979	11-11-78	88	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1960-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
250	846	1,550	2,900	4,300	6,070

WEIGHTED SKEW (LOGS)=	-0.22
MEAN (LOGS)=	2.38
STANDARD DEV. (LOGS)=	0.65

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
124	4.2	1,980	0.0	1.0	11.0	1.8	4.0

09513835 NEW RIVER AT BELL ROAD, NEAR PEORIA, AZ

LOCATION.--Lat 33°38'18", long 112°14'22", in NE¼NE¼ sec.3, T.3 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, on downstream side of bridge at Bell Road, 1.6 mi upstream from Skunk Creek, 3.1 mi north of Peoria, and 9 mi upstream from mouth.

DRAINAGE AREA.--185 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1963	08-17-63	1,550
1965	04-05-65	1,020
1966	12-22-65	4,060
1967	06-18-67	100
1968	12-19-67	14,600
1969	00-00-69	0
1970	09-05-70	11,900
1971	08-21-71	4,800
1972	07-17-72	1,520
1973	10-07-72	2,590
1974	00-00-74	0
1975	11-03-74	257
1976	02-09-76	2,280
1977	00-00-77	0
1978	03-02-78	12,500
1979	12-19-78	8,410
1980	02-20-80	12,100
1981	09-05-81	21
1982	03-15-82	876
1983	12-01-82	4,240
1984	00-00-84	0

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
64.5	38.2	2,700	0.1	1.0	15.6	1.9	4.0

09513835 NEW RIVER AT BELL ROAD, NEAR PEORIA, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-84

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	33	0.00	2.2	8.0	3.7	1.5
NOVEMBER	7.9	0.00	1.2	2.8	2.3	0.8
DECEMBER	230	0.00	29	67	2.3	20.1
JANUARY	106	0.00	13	31	2.4	8.8
FEBRUARY	491	0.00	53	124	2.3	37.3
MARCH	445	0.00	38	108	2.8	26.4
APRIL	2.6	0.00	0.19	0.62	3.3	0.1
MAY	0.76	0.00	0.04	0.18	4.1	0.0
JUNE	0.00	0.00	0.00	0.00		0.0
JULY	2.7	0.00	0.16	0.66	4.1	0.1
AUGUST	13	0.00	0.81	3.1	3.8	0.6
SEPTEMBER	99	0.00	6.0	24	4.0	4.2
ANNUAL	49	0.00	12	16	1.4	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1969-84

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90						
120						
183						

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963, 1965-84

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,920	6,510	11,700	21,200	30,500	41,800

WEIGHTED SKEW (LOGS)= -0.35
MEAN (LOGS)= 3.24
STANDARD DEV. (LOGS)= 0.67

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1968-84

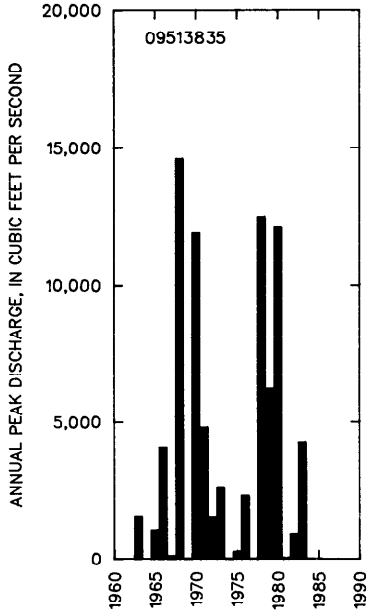
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	442	3,040	4,630	5,820	6,260	6,490
3	189	1,630	2,760	3,800	4,270	4,560
7	98	922	1,600	2,250	2,550	2,730
15	49.0	466	811	1,130	1,280	1,380
30	25.0	253	455	653	750	812
60	13.6	147	270	396	459	501
90	10.7	78.6	166	312	445	602

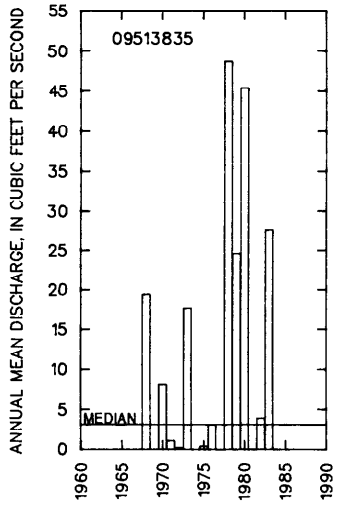
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-84

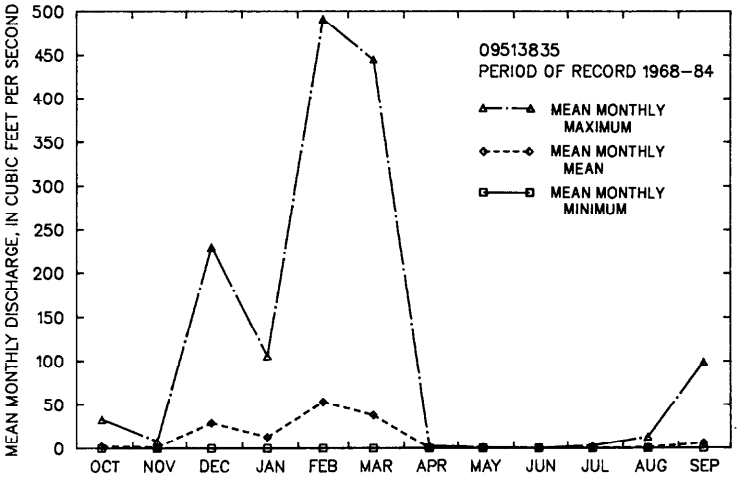
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
213	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09513835 NEW RIVER AT BELL ROAD, NEAR PEORIA, AZ--CONTINUED







09513860 SKUNK CREEK NEAR PHOENIX, AZ

LOCATION (Revised).--Lat 33°43'50", long 112°07'09", in SE¼ sec.35, T.5 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, on right bank dike of Skunk Creek flood-control channel, 300 ft east of frontage road of Interstate Highway 17, 3 mi north of Adobe, and 20 mi north of city hall in Phoenix. Prior to December 29, 1984, at site 300 ft downstream.

DRAINAGE AREA.--64.6 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	12-25-59	9,400		1975	10-29-74	240	
1961	00-00-61	0		1976	07-28-76	13	
1962	00-00-62	175		1977	01-03-77	70	
1963	00-00-63	480		1978	03-01-78	3,590	
1964	08-01-64	11,500		1979	01-18-79	600	
1965	02-07-65	400	ES	1980	02-20-80	1,210	
1966	08-18-66	700	ES	1981	07-16-81	311	
1967	09-02-67	950		1982	10-02-81	281	
1968	12-19-67	5,900		1983	11-30-82	6,170	
1969	00-00-69	0		1984	09-26-84	565	
1970	09-05-70	9,650		1985	01-26-85	1,320	C
1971	08-21-71	4,770		1986	07-22-86	906	C
1972	07-17-72	2,380		1987	10-10-86	3,440	C
1973	10-06-72	4,700		1988	11-01-87	2,250	C
1974	07-21-74	300		1989	01-04-89	111	C

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
49.2	19.7	2,180	0.0	1.0	12.2	1.9	4.2

09513860 SKUNK CREEK NEAR PHOENIX, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	26	0.00	2.1	5.9	2.8	11.3
NOVEMBER	41	0.00	2.6	8.9	3.5	13.8
DECEMBER	60	0.00	4.3	14	3.3	23.0
JANUARY	15	0.00	1.2	3.3	2.7	6.6
FEBRUARY	24	0.00	2.0	5.9	3.0	10.6
MARCH	46	0.00	2.2	9.7	4.5	11.6
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.03	0.00	0.00	0.01	4.7	0.0
JUNE	0.26	0.00	0.01	0.06	4.7	0.1
JULY	6.7	0.00	0.74	1.7	2.3	4.0
AUGUST	13	0.00	1.3	3.3	2.4	7.2
SEPTEMBER	43	0.00	2.2	9.1	4.1	11.9
ANNUAL	8.6	0.00	1.5	2.3	1.5	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD RECORD 1960-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
967	3,570	6,910	13,700	21,200	31,000

WEIGHTED SKEW (LOGS)= -0.16
MEAN (LOGS)= 2.97
STANDARD DEV. (LOGS)= 0.69

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-89

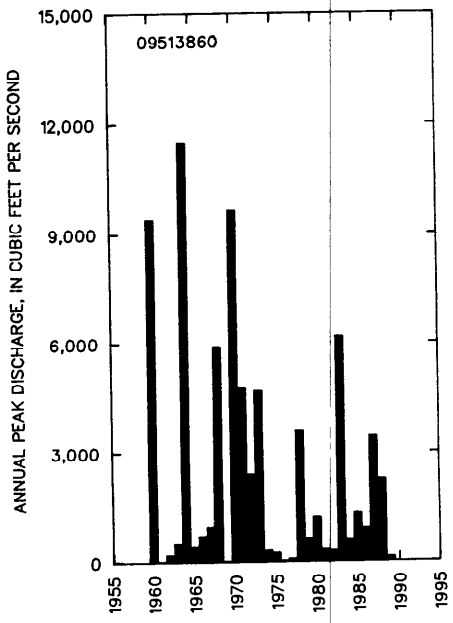
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	120	458	790	1,270	1,650	2,030
3	47	202	374	652	892	1,150
7	21	91	169	292	397	509
15	11	46	87	153	211	275
30	5.4	25	47	84	117	153
60	2.8	13	26	49	70	94
90	2.0	9.0	18	33	49	67

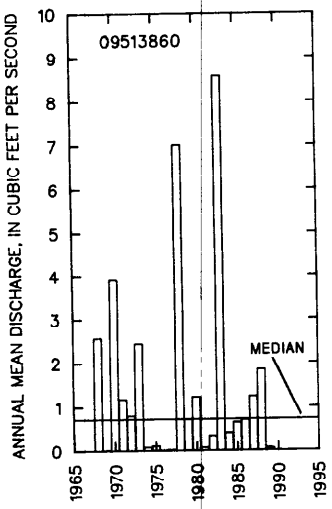
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-89

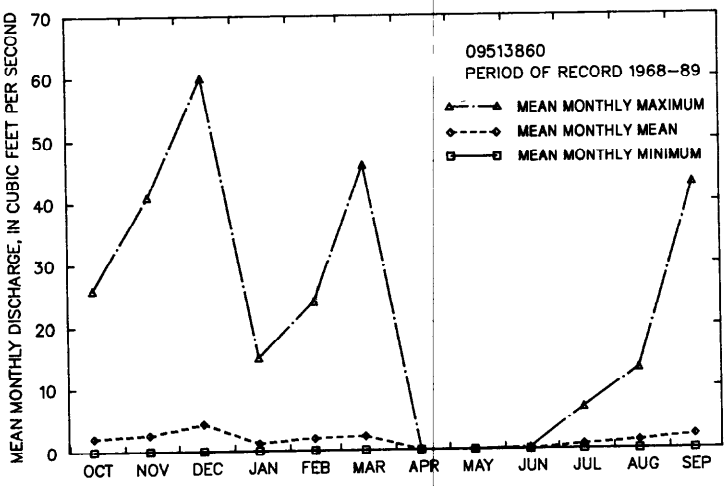
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09513860 SKUNK CREEK NEAR PHOENIX, AZ--CONTINUED







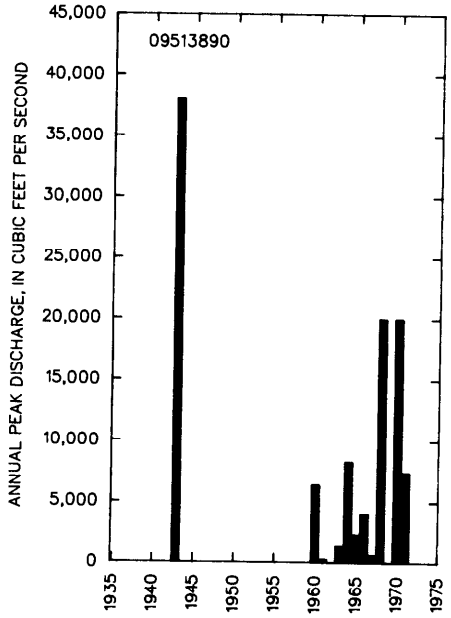
09513890 NEW RIVER AT PEORIA, AZ

LOCATION.--Lat 33°35'43", long 112°15'45", in SE¼ sec.16, T.3 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, at Grand Avenue, 1.75 mi northwest of Peoria.

DRAINAGE AREA.--317 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1943	00-00-43	38,000	HP
1960	12-25-59	6,400	
1961	07-22-61	250	
1962	00-00-62	0	
1963	08-17-63	1,390	
1964	08-01-64	8,300	
1965	02-07-65	2,300	
1966	12-23-65	4,000	
1967	06-18-67	600	
1968	12-19-67	20,000	ES
1969	00-00-69	0	
1970	09-05-70	20,000	
1971	08-21-71	7,430	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1943, 1960-71

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25†	50†	100†
50%	20%	10%	4%	2%	1%
3,160	11,300	20,800	38,000	54,900	75,100

WEIGHTED SKEW (LOGS)= -0.41
MEAN (LOGS)= 3.45
STANDARD DEV. (LOGS)= 0.71

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
65.3	44.1	2,320	0.0	1.0	13.3	1.8	3.8

09513910 NEW RIVER NEAR GLENDALE, AZ

LOCATION.--Lat 33°32'12", long 112°16'52", in NE¼NW¼ sec.8, T.2 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, at Glendale Avenue, 2 mi upstream from mouth, and 6 mi west of Glendale.

DRAINAGE AREA.--323 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1943	08-00-43	38,000	ES,HP	1969	00-00-69	0.0	
1955	07-00-55	12,000	ES,HP	1970	09-05-70	19,200	
1960	12-25-59	5,500	ES	1971	08-21-71	7,000	ES
1961	00-00-61	0		1972	07-17-72	6,300	
1962	00-00-62	0		1973	10-07-72	8,650	
1963	08-30-63	690		1974	08-05-74	775	
1964	08-01-64	7,000		1975	10-29-74	490	
1965	01-08-65	1,100		1976	09-25-76	1,550	
1966	12-23-65	13,000		1977	10-23-76	168	
1967	00-00-67	0		1978	03-02-78	12,300	
1968	12-19-67	19,800		1979	12-19-78	3,620	

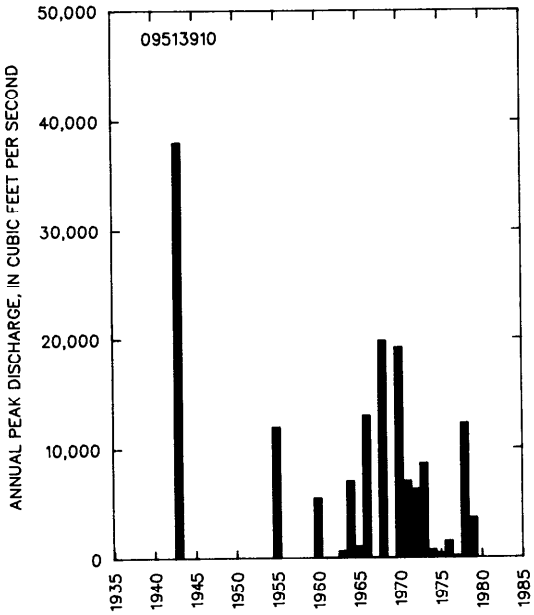
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1943, 1955, 1960-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
4,000	10,900	17,500	27,900	37,000	47,100

WEIGHTED SKEW (LOGS)= -0.44
MEAN (LOGS)= 3.56
STANDARD DEV. (LOGS)= 0.56

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
66.9	49.6	2,130	0.0	1.5	13.8	1.8	4.0

09513970 AGUA FRIA RIVER AT AVONDALE, AZ

LOCATION.--Lat 33°26'06", long 112°19'59", in NW¼ sec.14, T.1 N., R.1 W., Maricopa County, Hydrologic Unit 15070102, on downstream side of bridge on U.S. Highway 80, 0.5 mi east of Avondale, and 3 mi upstream from mouth.

DRAINAGE AREA.--2,066 mi^2, of which 1,433 mi^2 above Lake Pleasant is noncontributing except during periods of spill from Waddell Dam. Floodwaters from drainage area of 247 mi^2 above McMicken Dam may be diverted into Agua Fria River basin above station.

REMARKS.--Flow partly regulated by Lake Pleasant, 35 mi upstream. (See elsewhere in this report.) Records at times may include wastewater from the Arizona Canal of the Salt River Project. Excess floodwater released from McMicken Dam on Trilby Wash may enter Agua Fria River basin above station; this amount generally is negligible.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	12-25-59	4,700		1972	07-17-72	5,180	
1961	00-00-61	0		1973	10-07-72	5,000	
1962	00-00-62	0		1974	00-00-74	0	
1963	08-00-63	63		1975	00-00-75	0	
1964	08-01-64	3,000		1976	00-00-76	0	
1965	04-05-65	460		1977	00-00-77	0	
1966	12-23-65	800		1978	03-02-78	13,100	
1967	00-00-67	0		1979	12-19-78	29,300	UR
1968	12-20-67	20,000		1980	02-20-80	0	UR
1969	00-00-69	0		1981	00-00-81	0	C,UR
1970	08-06-70	20,600		1982	00-00-82	0	C,UR
1971	08-21-71	8,200					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
38.7	96.4	3,010	0.0	1.0	16.3	1.7	4.2

09513970 AGUA FRIA RIVER AT AVONDALE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-72, 1974-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.00	0.00	0.00	0.00		0.0
NOVEMBER	0.00	0.00	0.00	0.00		0.0
DECEMBER	520	0.00	54	148	2.8	13.9
JANUARY	518	0.00	42	138	3.3	10.9
FEBRUARY	2,900	0.00	212	773	3.6	54.6
MARCH	810	0.00	68	217	3.2	17.4
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	0.00	0.00	0.00	0.00		0.0
JUNE	1.1	0.00	0.08	0.30	3.7	0.0
JULY	15	0.00	1.00	3.9	3.7	0.3
AUGUST	24	0.00	1.7	6.4	3.7	0.4
SEPTEMBER	133	0.00	9.5	36	3.7	2.4
ANNUAL	232	0.00	32	66	2.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-72, 1975-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1						
3						
7						
14						
30						
60						
90						
120						
183						

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1960-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,400	9,300	15,000	26,000	37,000	49,000

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-72, 1974-82

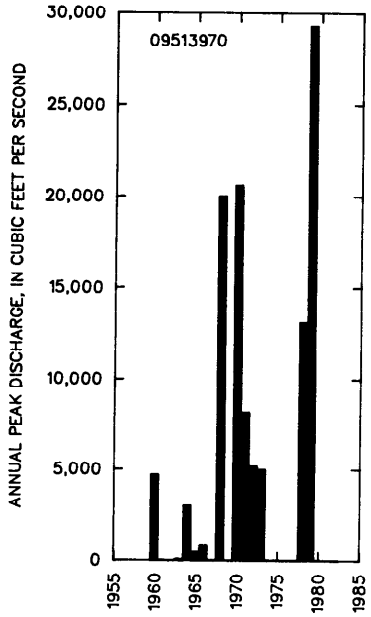
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	0.0	5,630	12,100	23,400	32,900	44,100
3	0.0	2,820	6,890	15,400	23,500	34,000
7	0.0	1,460	3,970	10,100	16,400	25,500
15	0.0	698	2,030	5,600	9,700	16,000
30	0.0	367	1,070	2,970	5,130	8,500
60	0.0	206	620	1,730	3,000	4,930
90	0.0	138	412	1,150	1,990	3,260

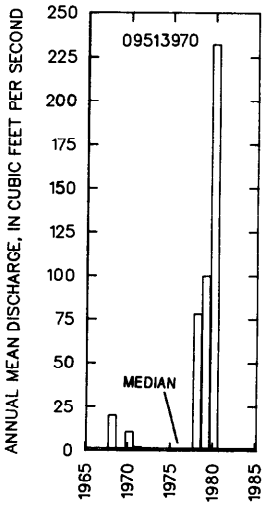
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-72, 1974-82

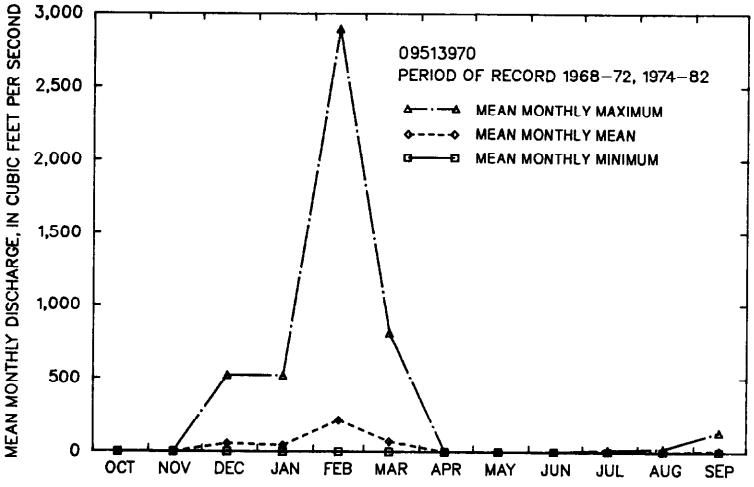
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
98	4.6	4.4	4.1	3.9	3.4	2.9	2.4	1.9	1.5	0.97	0.49	0.24	0.10	0.05	0.02	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09513970 AGUA FRIA RIVER AT AVONDALE, AZ--CONTINUED







09514200 WATERMAN WASH NEAR BUCKEYE, AZ

LOCATION.--Lat 33°19'49", long 112°30'33", in SW¼NE¼ sec.24, T.1 S., R.3 W., Maricopa County, Hydrologic Unit 15070101, 2.4 mi above mouth, 5.2 mi southeast of Buckeye.

DRAINAGE AREA.--420 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	09-13-64	2,680		1977	10-23-76	740	
1965	08-00-65	1,200	ES	1978	08-04-78	1,150	
1966	09-13-66	5,560		1980	02-15-80	2,220	
1967	09-03-67	6,300		1981	00-00-81	0	
1968	12-15-67	560		1982	09-27-82	1,660	
1969	08-29-69	400		1983	12-10-82	985	
1970	08-09-70	1,600		1984	09-02-84	3,520	
1971	08-11-71	2,080		1985	12-28-84	950	
1972	08-00-72	2,000		1986	07-22-86	1,500	
1973	00-00-73	0		1987	00-00-87	0	
1974	09-03-74	100	ES	1988	12-17-87	1,430	
1975	10-28-74	1,200		1989	00-00-89	402	
1976	09-26-76	1,180					

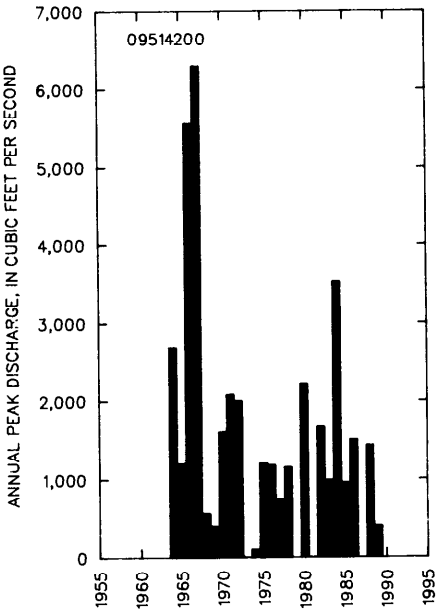
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-78, 1980-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,330	2,420	3,380	4,880	6,240	7,840

WEIGHTED SKEW (LOGS)= 0.14
MEAN (LOGS)= 3.15
STANDARD DEV. (LOGS)= 0.32

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
21.2	37.7	1,570	0.0	2.5	9.2	1.7	3.8

09515500 HASSAYAMPA RIVER AT BOX DAMSITE, NEAR WICKENBURG, AZ

LOCATION.--Lat 34°02'42", long 112°42'33", in SW¼SE¼ sec.7, T.8 N., R.4 W., Yavapai County, Hydrologic Unit 15070103, on right bank at Box damsite, 5.5 mi northeast of Wickenburg.

DRAINAGE AREA.--417 mi^2.

REMARKS.--Small diversions for irrigation and mining above station.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1925	09-19-25	25,500	HP	1963	08-17-63	2,150	
1927	02-16-27	27,100	HP	1964	07-14-64	1,230	
1937	02-07-37	22,000	HP	1965	09-02-65	9,060	
1938	03-03-38	10,000		1966	12-10-65	5,560	
1946	08-11-46	1,710		1967	12-07-66	1,740	
1947	08-08-47	2,300		1968	12-19-67	11,200	
1948	08-05-48	5,600		1969	09-13-69	4,630	
1949	09-26-49	2,910		1970	09-05-70	[2]58,000	
1950	10-18-49	5,500		1971	08-25-71	556	
1951	08-29-51	[1]27,000		1972	08-27-72	800	
1952	12-30-51	1,590		1973	10-07-72	2,600	
1953	07-18-53	865		1974	07-20-74	5,560	
1954	03-23-54	3,090		1975	07-28-75	154	
1955	07-23-55	8,840		1976	02-09-76	4,560	
1956	08-18-56	1,210		1977	08-15-77	315	
1957	08-10-57	1,980		1978	03-02-78	16,000	
1958	09-05-58	10,600		1979	03-28-79	9,640	
1959	08-24-59	5,110		1980	02-19-80	24,900	
1960	12-26-59	3,210		1981	07-10-81	698	
1961	08-19-61	1,150		1982	03-15-82	2,940	
1962	09-21-62	1,510					

[1] Highest since 1927.
[2] Highest since 1890.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
71.0	45.0	4,750	9.6	1.0	19.3	2.4	4.7

09515500 HASSAYAMPA RIVER AT BOX DAMSITE, NEAR WICKENBURG, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1947-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	50	0.25	4.0	9.4	2.3	1.4
NOVEMBER	104	0.21	7.2	20	2.7	2.4
DECEMBER	298	0.22	20	56	2.7	7.0
JANUARY	365	0.41	28	74	2.6	9.5
FEBRUARY	1,280	0.26	63	214	3.4	21.5
MARCH	1,170	0.44	84	211	2.5	28.5
APRIL	247	0.34	34	68	2.0	11.5
MAY	77	0.03	8.1	16	2.0	2.7
JUNE	27	0.00	3.5	5.8	1.7	1.2
JULY	42	0.19	5.9	8.1	1.4	2.0
AUGUST	372	0.33	22	62	2.8	7.5
SEPTEMBER	178	0.71	14	34	2.4	4.9
ANNUAL	169	1.2	24	39	1.6	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100† 1%
1	0.63	0.28	0.16	0.08	0.00	0.00
3	0.69	0.32	0.19	0.10	0.00	0.00
7	0.76	0.36	0.21	0.11	0.00	0.00
14	0.88	0.42	0.25	0.13	0.00	0.00
30	1.1	0.55	0.35	0.20	0.00	0.00
60	1.3	0.76	0.52	0.33	0.00	0.00
90	1.6	0.81	0.48	0.29	0.15	0.09
120	1.8	0.97	0.67	0.49	0.32	0.25
183	2.5	1.4	1.0	0.84	0.67	0.58

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1925, 1927, 1937-38, 1946-82

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
3,180	8,480	13,900	23,300	32,270	43,000

WEIGHTED SKEW (LOGS)= -0.16
MEAN (LOGS)= 3.49
STANDARD DEV. (LOGS)= 0.52

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1947-82

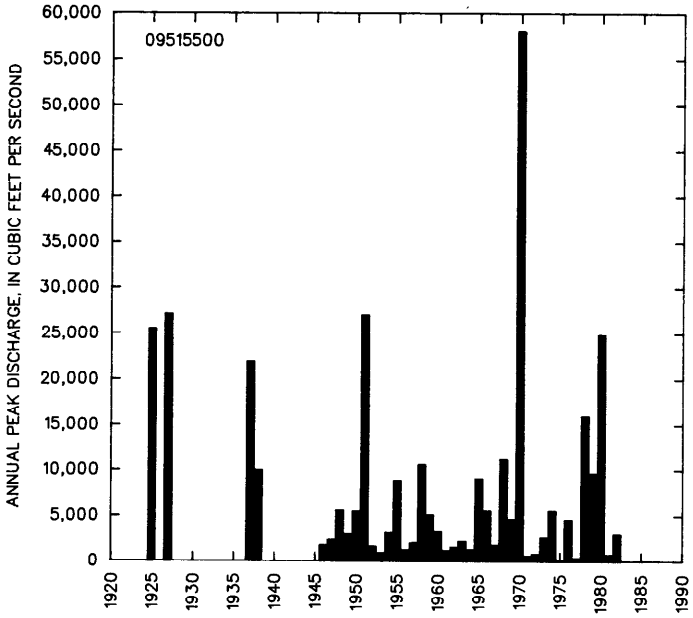
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100† 1%
1	598	2,010	3,680	6,880	10,200	14,400
3	271	975	1,900	3,850	6,070	9,130
7	142	540	1,090	2,330	3,810	5,940
15	83	335	704	1,580	2,680	4,320
30	52	208	441	1,010	1,740	2,860
60	32	124	262	602	1,050	1,740
90	24	93	199	462	808	1,350

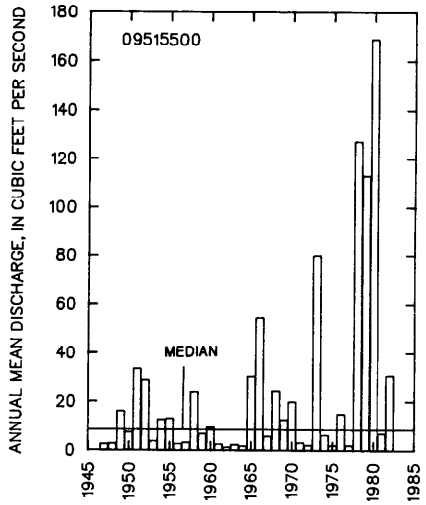
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-82

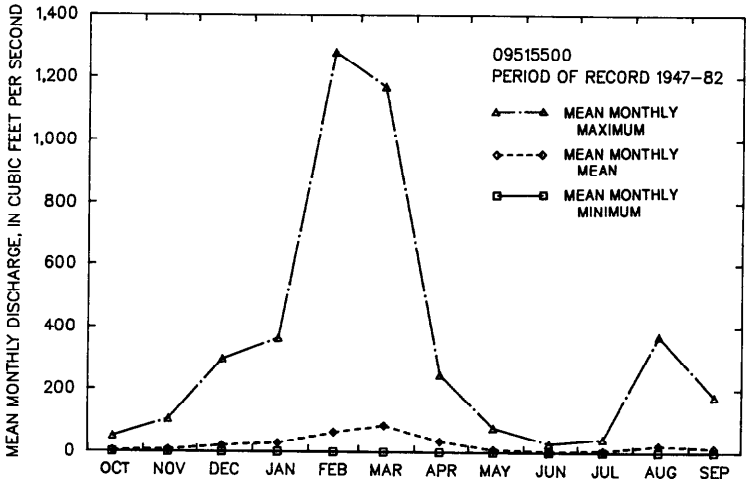
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
404	83	27	12	5.6	3.1	2.3	1.9	1.7	1.5	1.2	0.67	0.41	0.24	0.12	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09515500 HASSAYAMPA RIVER AT BOX DAMSITE, NEAR WICKENBURG, AZ--CONTINUED







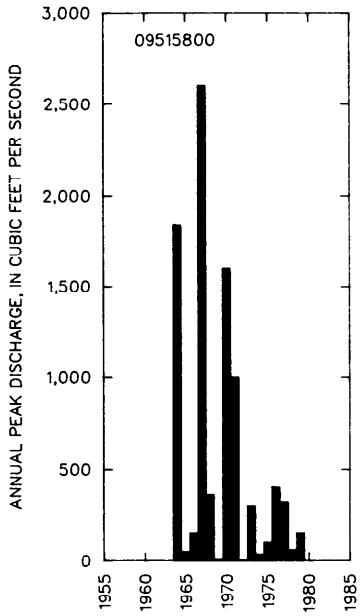
09515800 HARTMAN WASH NEAR WICKENBURG, AZ

LOCATION.--Lat 33°57'46", long 112°49'40", in SE¼ sec.12, T.7 N., R.6 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 5.7 mi west of Wickenburg.

DRAINAGE AREA.--5.57 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-23-64	1,840	
1965	09-04-65	50	
1966	09-13-66	150	
1967	08-14-67	2,600	
1968	12-19-67	360	
1969	08-00-69	5.0	ES
1970	09-05-70	1,600	
1971	08-19-71	1,000	
1972	09-03-72	0.5	ES
1973	10-07-72	300	ES
1974	07-30-74	35	ES
1975	07-13-75	100	
1976	09-25-76	400	ES
1977	09-27-77	320	ES
1978	01-17-78	60	ES
1979	11-11-78	150	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
218	796	1,550	3,150	4,960	7,450

WEIGHTED SKEW (LOGS)= -0.05
MEAN (LOGS)= 2.33
STANDARD DEV. (LOGS)= 0.67

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
71.6	5.4	2,690	0.0	3.0	11.0	1.6	3.8

09516500 HASSAYAMPA RIVER NEAR MORRISTOWN, AZ

LOCATION.--Lat 33°53'06", long 112°39'41", in SW¼SE¼ sec.3, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, 3.0 mi northwest of Morristown, 7 mi southeast of Wickenburg.

DRAINAGE AREA.--796 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1939	09-06-39	6,200		1971	08-18-71	2,000	
1940	02-01-40	160		1972	08-27-72	700	
1941	03-02-41	6,100		1973	10-07-72	2,000	
1942	08-05-42	100	ES	1974	07-20-74	650	ES
1943	08-03-43	7,700		1975	07-29-75	50	LT
1944	08-09-44	3,520		1976	02-09-76	800	
1945	08-02-45	2,200		1977	08-15-77	1,600	ES
1946	09-17-46	2,310		1978	03-02-78	18,000	
1947	08-08-47	6,000		1979	12-18-78	9,600	
1954	00-00-54	0		1980	02-20-80	17,000	
1956	00-00-56	0		1981	07-10-81	4,800	
1964	07-12-64	4,000	ES	1983	03-03-83	2,520	
1965	09-02-65	9,280		1984	09-10-84	26,700	
1966	09-13-66	3,210		1985	12-28-84	848	
1967	09-00-67	1,150		1986	11-26-85	2,740	
1968	12-19-67	4,800		1987	11-18-86	714	
1969	09-13-69	650		1988	08-27-88	6,820	
1970	09-05-70	[1]47,500		1989	01-04-89	1,210	

[1]Highest since 1916.

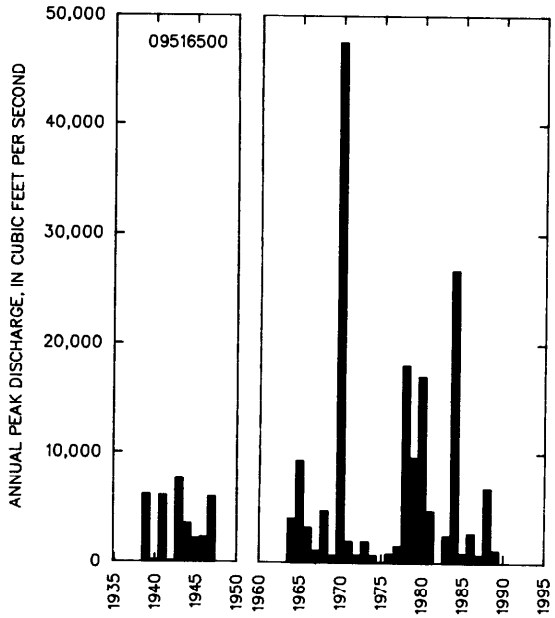
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-47, 1964-81, 1983-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100†
50%	20%	10%	4%	2%	1%
2,670	7,180	12,200	21,500	31,300	43,900

WEIGHTED SKEW (LOGS)= 0.10
MEAN (LOGS)= 3.43
STANDARD DEV. (LOGS)= 0.50

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
84.9	58.4	3,190	5.2	1.72	16.9	2.2	4.3

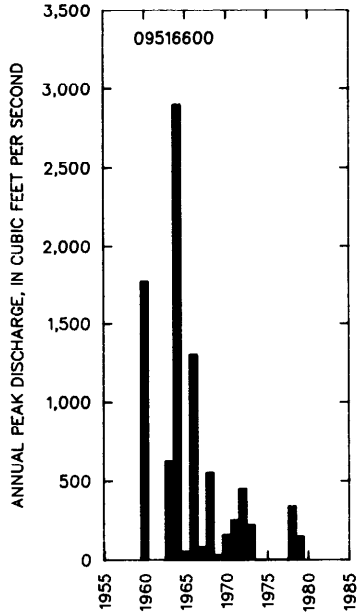
09516600 OX WASH NEAR MORRISTOWN, AZ

LOCATION.--Lat 33°53'00", long 112°39'00", in NW¼ sec.11, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 2.4 mi northwest of Morristown.

DRAINAGE AREA.--6.31 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1960	00-00-60	1,770	HP
1963	08-26-63	628	
1964	08-26-64	2,900	
1965	09-02-65	50	ES
1966	09-13-66	1,300	
1967	09-00-67	80	ES
1968	00-00-68	550	
1969	01-15-69	30	
1970	09-05-70	160	
1971	08-20-71	250	
1972	09-00-72	450	
1973	10-00-72	220	
1974	00-00-74	0	
1975	00-00-75	0	
1976	00-00-76	0	
1977	00-00-77	0	
1978	02-22-78	335	
1979	12-18-78	150	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1960, 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
194	662	1,240	2,400	3,660	5,330

WEIGHTED SKEW (LOGS)= -0.10
MEAN (LOGS)= 2.28
STANDARD DEV. (LOGS)= 0.64

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
101	6.6	2,290	0.0	3.0	12.2	1.8	3.8

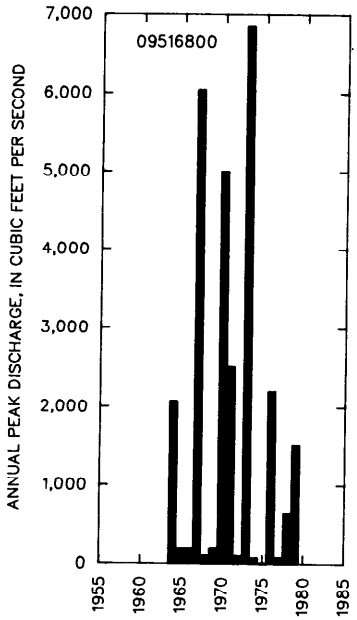
09516800 JACK RABBIT WASH NEAR TONOPAH, AZ

LOCATION.--Lat 33°39'32", long 112°49'40", in NE¼NW¼ sec.25, T.4 N., R.6 W., Maricopa County, Hydrologic Unit 15070103, 100 ft upstream from the Wickenburg-Hassayampa Road, 4.5 mi upstream from Star Wash, and 14 mi northeast of Tonopah.

DRAINAGE AREA.--137 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	08-26-64	2,070	
1965	04-04-65	200	ES
1966	09-13-66	200	ES
1967	09-03-67	6,040	
1968	12-19-67	105	
1969	09-13-69	200	ES
1970	09-05-70	5,000	ES
1971	08-17-71	2,500	ES
1972	09-18-72	100	ES
1973	10-07-72	6,840	
1974	07-07-74	75	
1975	03-11-75	6.0	ES
1976	09-25-76	2,200	
1977	08-16-77	80	
1978	10-06-77	650	
1979	01-18-79	1,510	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
547	2,440	5,300	12,100	20,500	32,900

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 2.73
STANDARD DEV. (LOGS)= 0.78

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
34.4	22.5	2,260	0.0	2.5	9.2	1.5	3.7

09517000 HASSAYAMPA RIVER NEAR ARLINGTON, AZ

LOCATION.--Lat 33°20'50", long 112°43'30", in NW¼ sec.13, T.1 S., R.5 W., Maricopa County, Hydrologic Unit 15070104, at former U.S. Highway 80, 1.8 mi upstream from mouth and 2.8 mi northeast of Arlington.

DRAINAGE AREA.--1,470 mi^2, approximately.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1961	09-11-61	50	ES	1975	00-00-75	0	
1962	09-06-62	470		1976	09-26-76	13,000	
1963	08-00-63	1,930		1977	10-24-76	4,300	
1964	08-14-64	6,500		1978	03-02-78	20,000	
1965	02-07-65	3,000		1979	11-11-78	3,300	
1966	12-10-65	1,600		1980	02-20-80	11,200	
1967	09-05-67	5,270		1983	09-30-83	3,300	
1968	12-20-67	4,000		1984	09-02-84	2,850	
1969	09-15-69	500	ES	1985	12-28-84	372	
1970	09-05-70	[1]39,000		1986	11-26-85	2,610	
1971	08-11-71	1,230		1987	10-10-86	404	
1972	08-12-72	225		1988	11-01-87	2,800	
1973	10-07-72	12,300		1989	08-11-89	1,510	
1974	09-00-74	250					

[1]Highest since 1916.

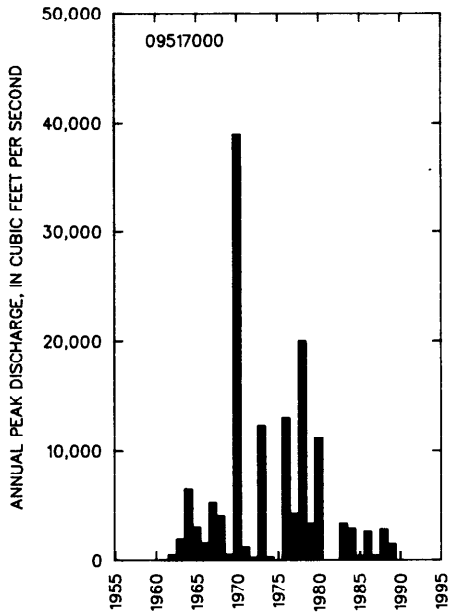
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-80, 1983-84, 1986-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
2,720	7,470	12,900	23,400	34,500	49,300

WEIGHTED SKEW (LOGS)= 0.15
MEAN (LOGS)= 3.44
STANDARD DEV. (LOGS)= 0.51

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
39.9	93.6	3,010	2.7	2.0	15.9	1.9	4.0

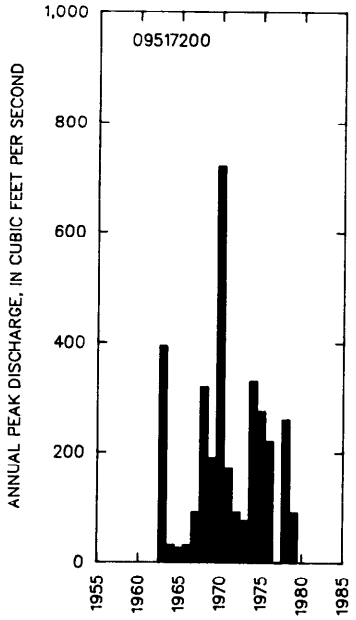
09517200 CENTENNIAL WASH TRIBUTARY NEAR WENDEN, ARIZ.

LOCATION.--Lat 33°50'40", long 113°27'00", in SW¼SW¼ sec.24, T.6 N., R.12 W., Yuma County, Hydrologic Unit 15070104, at U.S. Highway 60, 5 mi northeast of Wenden.

DRAINAGE AREA.--2.79 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-16-63	394	
1964	08-02-64	30	ES
1965	02-07-65	25	ES
1966	12-10-65	30	ES
1967	09-02-67	90	
1968	00-00-68	320	
1969	09-16-69	190	
1970	09-05-70	720	
1971	08-20-71	170	
1972	10-00-71	90	
1973	02-11-73	75	
1974	07-00-74	330	ES
1975	07-29-75	275	
1976	09-25-76	220	
1977	00-00-77	0	
1978	02-13-78	260	
1979	05-21-79	90	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
132	312	479	743	977	1,240

WEIGHTED SKEW (LOGS)= -0.24
MEAN (LOGS)= 2.10
STANDARD DEV. (LOGS)= 0.46

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
193	5.4	2,480	0.0	1.0	8.0	1.6	3.7

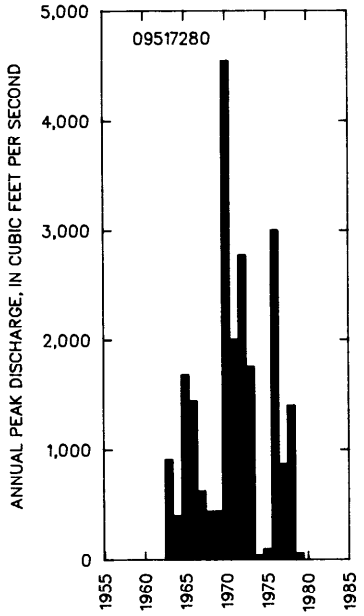
09517280 TIGER WASH NEAR AGUILA, AZ

LOCATION.--Lat 33°44'30", long 113°16'43", in SW¼SW¼ sec.26, T.5 N., R.10 W., Maricopa County, Hydrologic Unit 15070104, 17 mi south of Aguila.

DRAINAGE AREA.--85.2 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-16-63	910	ES
1964	10-19-63	400	ES
1965	08-18-65	1,680	
1966	09-13-66	1,450	
1967	08-14-67	620	
1968	12-19-67	440	
1969	09-14-69	441	
1970	08-20-70	4,550	
1971	08-20-71	2,000	
1972	08-00-72	2,770	
1973	10-06-72	1,750	
1974	08-03-74	45	ES
1975	07-30-75	100	ES
1976	09-25-76	3,000	
1977	08-16-77	870	
1978	03-01-78	1,400	
1979	12-18-78	60	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
1,010	2,120	3,060	4,450	5,630	6,910

WEIGHTED SKEW (LOGS)=	-0.25
MEAN (LOGS)=	2.99
STANDARD DEV. (LOGS)=	0.40

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
35.2	15.0	2,590	0.0	1.0	9.6	1.5	3.6

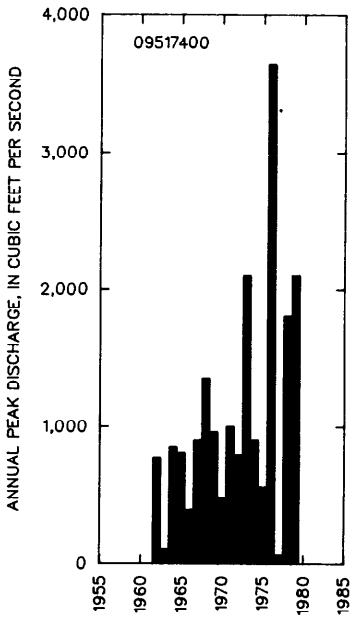
09517400 WINTERS WASH NEAR TONOPAH, AZ

LOCATION.--Lat 33°29'22", long 112°55'05", in SW¼NW¼ sec.30, T.2 N., R.6 W., Maricopa County, Hydrologic Unit 15070104, 0.3 mi downstream from Airline Road, and 1 mi east of Tonopah.

DRAINAGE AREA.--47.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	09-05-62	776	
1963	09-03-63	100	ES
1964	08-00-64	850	
1965	02-07-65	810	
1966	12-10-65	390	
1967	09-03-67	900	
1968	12-19-67	1,350	
1969	11-15-68	960	
1970	09-05-70	480	
1971	08-20-71	1,000	
1972	08-12-72	795	
1973	10-06-72	2,100	
1974	03-20-74	900	
1975	10-28-74	560	
1976	09-25-76	3,640	
1977	08-16-77	60	ES
1978	03-02-78	1,800	
1979	12-18-78	2,100	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
857	1,540	2,120	2,980	3,720	4,560

WEIGHTED SKEW (LOGS)= 0.11
MEAN (LOGS)= 2.94
STANDARD DEV. (LOGS)= 0.30

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
83.7	18.0	1,630	0.0	1.0	9.1	1.5	3.6

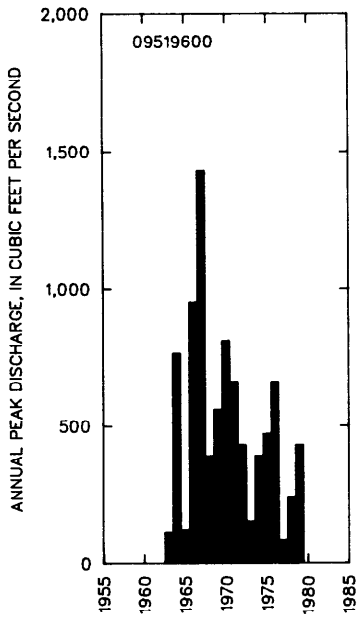
09519600 RAINBOW WASH TRIBUTARY NEAR BUCKEYE, AZ

LOCATION.--LAT 33°14'35", long 112°38'15", in NE¼ sec.23, T.2 S., R.4 W., Maricopa County, Hydrologic Unit 15070101, at U.S. Highway 80, 9.5 mi southwest of Buckeye.

DRAINAGE AREA.--3.45 mi^2 of which 1.02 mi^2 is noncontributing.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	112	
1964	09-13-64	763	
1965	02-07-65	120	
1966	09-13-66	950	
1967	09-03-67	1,430	
1968	08-00-68	390	
1969	08-29-69	560	
1970	08-08-70	810	
1971	07-00-71	660	
1972	08-00-72	430	
1973	11-00-72	150	
1974	07-07-74	390	
1975	10-28-74	470	
1976	09-26-76	660	
1977	08-16-77	80	ES
1978	08-04-78	240	ES
1979	08-12-79	430	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
484	748	945	1,220	1,440	1,670

WEIGHTED SKEW (LOGS)=	0.12
MEAN (LOGS)=	2.69
STANDARD DEV. (LOGS)=	0.22

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
34.4	3.1	950.0	0.0	2.0	7.6	1.4	3.6

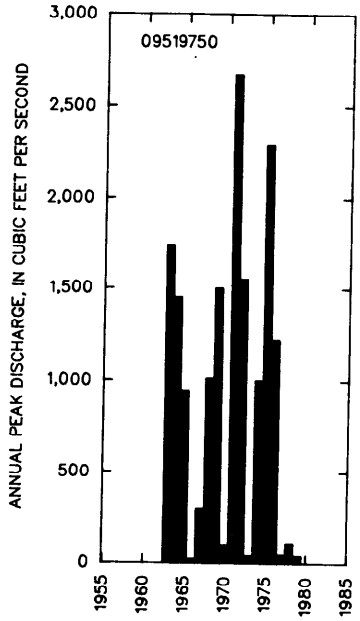
09519750 BENDER WASH NEAR GILA BEND, AZ

LOCATION.--Lat 32°54'25", long 112°33'05", in NW¼ sec.15, T.6 S., R.3 W., Maricopa County, Hydrologic unit 15070101, along side of Interstate Highway 8, 10 mi southeast of Gila Bend. Prior to Oct. 1, 1966, at site 0.65 mi downstream.

DRAINAGE AREA.--68.8 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	1,740	
1964	00-00-64	1,450	
1965	00-00-65	943	
1966	12-22-65	20	LT
1967	09-03-67	300	ES
1968	10-03-67	1,010	
1969	08-18-69	1,500	
1970	08-14-70	100	ES
1971	08-00-71	2,670	
1972	06-00-72	1,550	
1973	07-29-73	40	
1974	08-03-74	1,000	
1975	08-00-75	2,290	
1976	09-25-76	1,220	
1977	09-11-77	45	ES
1978	00-00-78	110	ES
1979	01-25-79	40	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
466	1,740	3,270	6,150	9,040	12,600

WEIGHTED SKEW (LOGS)=	-0.38
MEAN (LOGS)=	2.62
STANDARD DEV. (LOGS)=	0.72

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
73.9	18.2	1,900	0.0	2.0	8.5	1.5	4.0

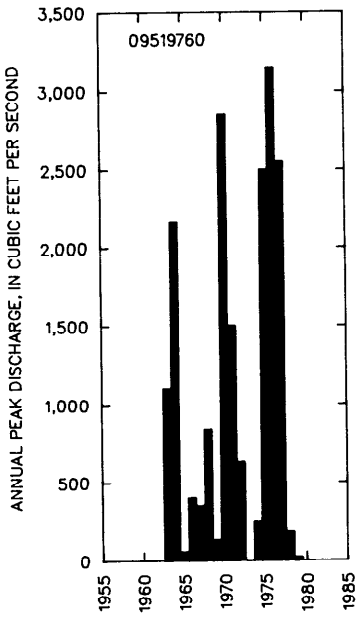
09519760 SAUCEDA WASH NEAR GILA BEND, AZ

LOCATION.--Lat 32°52'14", long 112°45'30", in SE¼SW¼ sec.27, T.6 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, at State Highway 85, 5.3 mi south of Gila Bend.

DRAINAGE AREA.--126 mi^2 of which 20 mi^2 also contributes to an adjoining basin.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-00-63	1,100	ES
1964	08-12-64	2,160	
1965	08-00-65	55	
1966	08-00-66	400	ES
1967	10-04-66	350	
1968	10-02-67	840	
1969	08-00-69	130	ES
1970	08-00-70	2,850	
1971	08-00-71	1,500	
1972	08-00-72	630	
1973	00-00-73	0	
1974	08-03-74	250	
1975	09-08-75	2,500	
1976	09-26-76	3,150	
1977	08-15-77	2,550	
1978	08-08-78	180	
1979	08-12-79	20	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
584	1,880	3,310	5870	8,350	11,400

WEIGHTED SKEW (LOGS)= -0.32
MEAN (LOGS)= 2.73
STANDARD DEV. (LOGS)= 0.63

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
46.7	32.5	1,980	0.0	2.0	8.2	1.5	4.0

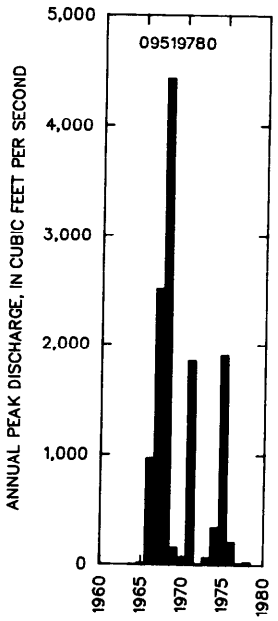
09519780 WINDMILL WASH NEAR GILA BEND, AZ

LOCATION.--Lat 33°02'54", long 112°50'17", in SE¼ sec.25, T.4 S., R.6 W., Maricopa County, Hydrologic Unit 15070101, at county road, 10.5 mi northwest of Gila Bend.

DRAINAGE AREA.--12.9 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1964	00-00-64	0	
1965	02-09-65	10	LT
1966	09-13-66	967	
1967	09-03-67	2,510	
1968	12-19-67	4,430	
1969	09-15-69	150	
1970	08-12-70	65	
1971	08-15-71	1,850	
1972	06-06-72	5.0	ES
1973	10-00-72	60	ES
1974	08-03-74	340	ES
1975	10-29-74	1,900	
1976	09-26-76	200	ES
1977	09-27-77	10	ES
1978	04-13-78	20	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-78

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
155	1,160	3,120	8,550	16,000	27,600

WEIGHTED SKEW (LOGS)= -0.28
MEAN (LOGS)= 2.14
STANDARD DEV. (LOGS)= 1.09

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
64.4	9.1	1,050	0.0	1.0	6.1	1.3	3.6

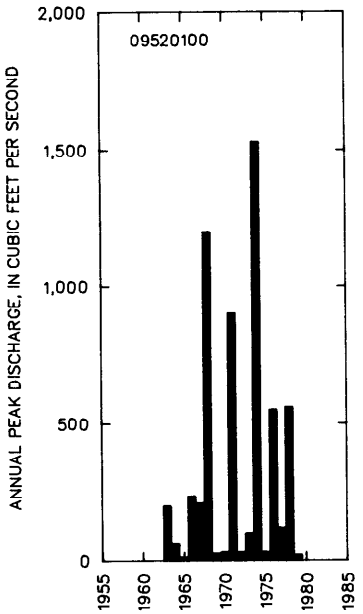
09520100 MILITARY WASH NEAR SENTINEL, AZ

LOCATION.--Lat 32°50'43", long 113°16'44", in SW¼ sec.3, T.7 S., R.10 W., Maricopa County, Hydrologic Unit 15070201, at U.S. Highway 80, 4.1 mi west of Sentinel.

DRAINAGE AREA.--8.70 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-30-63	200	ES
1964	10-19-63	60	ES
1965	01-06-65	12	ES
1966	12-10-65	235	
1967	09-03-67	210	
1968	12-19-67	1,200	
1969	08-13-69	25	ES
1970	08-20-70	30	ES
1971	08-20-71	900	
1972	06-00-72	30	
1973	11-00-72	100	
1974	08-02-74	1,530	
1975	07-27-75	30	
1976	07-27-76	550	ES
1977	08-15-77	120	ES
1978	08-04-78	560	
1979	01-17-79	20	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
124	468	946	2,030	3,330	5,220

WEIGHTED SKEW (LOGS)= 0.08
MEAN (LOGS)= 2.10
STANDARD DEV. (LOGS)= 0.68

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
56.0	5.0	674.0	0.0	1.0	5.0	1.3	3.6

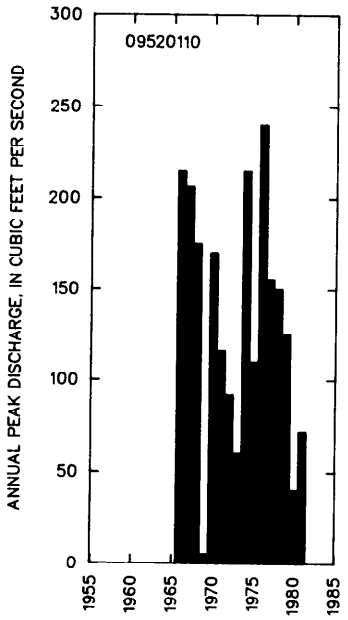
09520110 HOT SHOT ARROYO NEAR AJO, AZ

LOCATION.--Lat 32°20'49", long 112°48'31", in SW¼ sec.29, T.12 S., R.5 W., Pima County, Hydrologic Unit 15070202, at State Highway 85, 3 mi southeast of Ajo.

DRAINAGE AREA.--0.44 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1966	09-13-66	215	
1967	07-15-67	206	
1968	10-03-67	175	
1969	00-00-69	5.0	ES
1970	07-27-70	170	
1971	00-00-71	116	
1972	08-31-72	92	
1973	10-06-72	60	
1974	09-23-74	215	
1975	10-29-74	110	
1976	09-05-76	240	
1977	09-11-77	155	
1978	10-06-77	150	
1979	09-14-79	125	
1980	08-13-80	40	
1981	01-12-81	72	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
136	191	226	268	298	327

WEIGHTED SKEW (LOGS)=	-0.28
MEAN (LOGS)=	2.13
STANDARD DEV. (LOGS)=	0.18

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
83.3	1.6	1,760	0.0	3.0	8.1	1.7	4.0

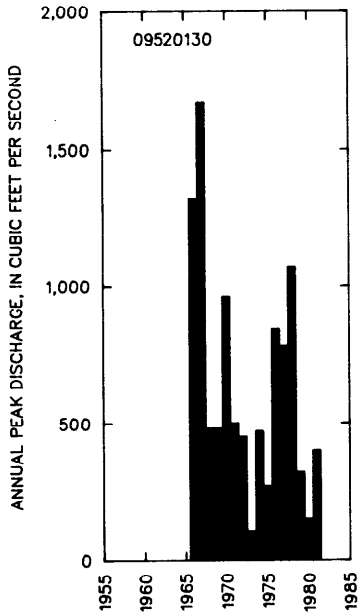
09520130 DARBY ARROYO NEAR AJO, AZ

LOCATION.--Lat 32°21'19", long 112°49'31", in NW¼ sec.30, T.12 S., R.5 W., Pima County, Hydrologic Unit 15070202, at State Highway 85, 2 mi southeast of Ajo.

DRAINAGE AREA.--4.72 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1966	09-13-66	1,320
1967	09-06-67	1,670
1968	07-04-68	480
1969	08-11-69	480
1970	08-02-70	960
1971	08-19-71	500
1972	10-06-71	450
1973	10-06-72	105
1974	09-26-74	470
1975	10-29-74	270
1976	08-11-76	840
1977	07-04-77	780
1978	10-06-77	1,070
1979	11-11-78	320
1980	08-13-80	150
1981	08-23-81	400



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
550	922	1,210	1,640	1,990	2,380

WEIGHTED SKEW (LOGS)= 0.11
MEAN (LOGS)= 2.75
STANDARD DEV. (LOGS)= 0.26

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
71.1	6.0	1,920	0.0	3.0	8.1	1.6	4.1

09520160 GIBSON ARROYO AT AJO, AZ

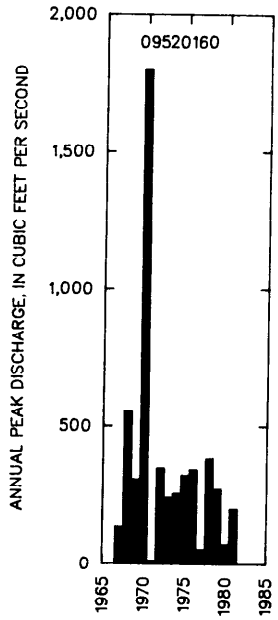
LOCATION.--Lat 32°22'48", long 112°51'40", in NW¼SW¼ sec.14, T.12 S., R.6 W., Pima County, Hydrologic Unit 15070202, at 2nd Avenue next to railroad tracks in Ajo.

DRAINAGE AREA.--2.18 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1967	07-22-67	132	
1968	07-04-68	553	
1969	08-11-69	306	
1970	08-02-70	[1]1,800	
1971	08-19-71	10	LT
1972	08-00-72	345	
1973	08-00-73	240	
1974	08-02-74	254	
1975	10-29-74	320	
1976	09-05-76	340	
1977	07-04-77	50	
1978	08-11-78	380	
1979	08-13-79	270	
1980	08-13-80	70	
1981	08-23-81	200	

[1]Highest since 1960.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-81

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
231	474	686	1,010	1,300	1,620

WEIGHTED SKEW (LOGS)= -0.07
MEAN (LOGS)= 2.36
STANDARD DEV. (LOGS)= 0.37

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
171	2.8	2,100	0.0	2.0	8.1	1.7	4.1

09520170 RIO CORNEZ NEAR AJO, AZ

LOCATION.--Lat 32°29'58", long 112°52'50", in SE¼NE¼ sec.4, T.11 S., R.6 W., Pima County, Hydrologic Unit 15070202, on downstream side of bridge on State Highway 85, and 8 mi north of Ajo.

DRAINAGE AREA.--243 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1967	07-09-67	3,460
1968	08-05-68	3,750
1969	08-29-69	1,610
1970	08-16-70	2,300
1971	08-20-71	3,000
1972	08-09-72	2,510
1973	08-19-73	2,620
1974	08-02-74	6,000
1975	09-07-75	2,570
1976	09-04-76	8,030
1977	09-10-77	1,390
1978	10-06-77	7,220
1979	11-11-78	3,360
1980	00-00-80	0

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
26.8	33.6	1,950	0.0	2.0	8.4	1.7	4.2

09520170 RIO CORNEZ NEAR AJO, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-78

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	41	0.00	4.6	12	2.7	9.1
NOVEMBER	3.8	0.00	0.64	1.2	1.9	1.3
DECEMBER	2.7	0.00	0.24	0.80	3.3	0.5
JANUARY	9.0	0.00	0.82	2.7	3.3	1.6
FEBRUARY	3.0	0.00	0.27	0.90	3.3	0.5
MARCH	39	0.00	3.6	12	3.3	7.2
APRIL	0.00	0.00	0.00	0.00		0.0
MAY	8.0	0.00	0.73	2.4	3.3	1.5
JUNE	1.2	0.00	0.11	0.35	3.3	0.2
JULY	35	0.00	6.5	11	1.7	13.0
AUGUST	56	0.00	18	18	0.98	36.5
SEPTEMBER	89	0.00	14	27	1.8	28.6
ANNUAL	12	0.96	4.2	3.3	0.79	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1968-78

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90						
120						
183	0.18	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1967-80

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
3,000	4,850	6,280	8,310	9,980	11,800

WEIGHTED SKEW (LOGS)= 0.13
MEAN (LOGS)= 3.48
STANDARD DEV. (LOGS)= 0.24

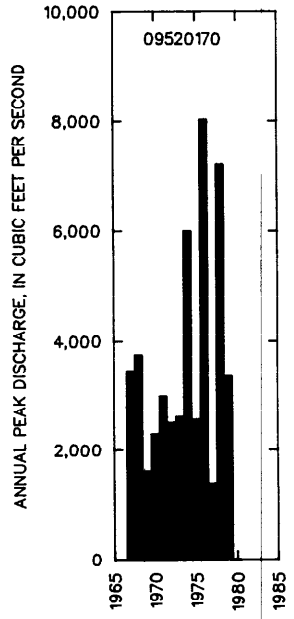
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-78

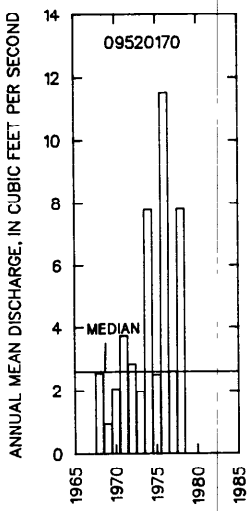
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	432	761	972	1,220	1,380	1,530
3	228	396	487	577	628	668
7	96	170	223	291	343	395
15	53	87	108	132	148	162
30	30	53	71	97	119	142
60	16	29	38	52	64	77
90	11	21	30	45	60	77

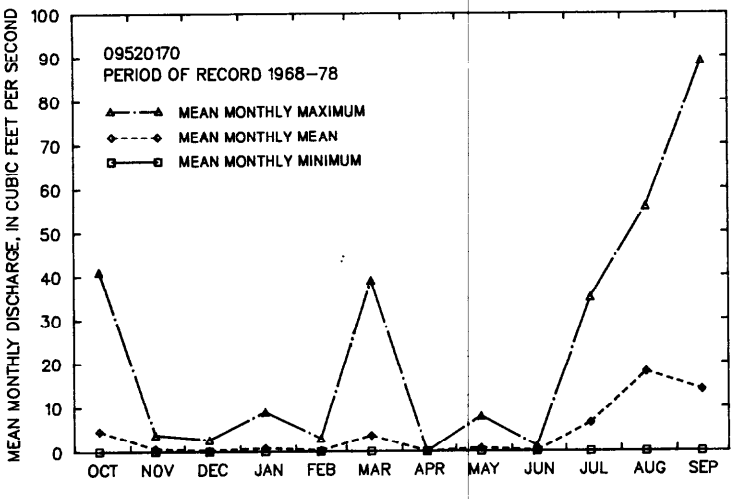
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-78

DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
101	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.


09520170
ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
10,000
8,000
6,000
4,000
2,000
0
1965
1970
1975
1980
1985


09520170
ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
MEDIAN
14
12
10
8
6
4
2
0
1965
1970
1975
1980
1985


09520170
PERIOD OF RECORD 1968–78
MEAN MONTHLY MAXIMUM
MEAN MONTHLY MEAN
MEAN MONTHLY MINIMUM
MEAN MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND
100
90
80
70
60
50
40
30
20
10
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

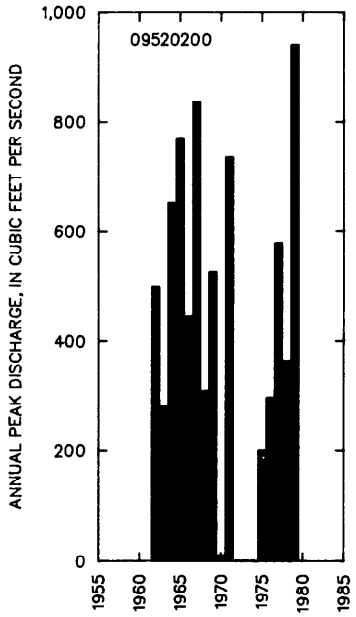
09520200 BLACK GAP WASH NEAR AJO, AZ

LOCATION.--Lat 32°42'23", long 112°50'43", in NW¼NE¼ sec.26, T.8 S., R.6 W., Maricopa County, Hydrologic Unit 15070202, at State Highway 85, 5.7 mi north of Midway, and 23 mi north of Ajo.

DRAINAGE AREA.--12.1 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1962	00-00-62	499	
1963	08-06-63	280	
1964	10-19-63	652	
1965	08-00-65	770	
1966	09-13-66	445	
1967	07-14-67	837	
1968	08-00-68	309	
1969	08-14-69	525	
1970	08-20-70	10	ES
1971	09-30-71	735	
1972	00-00-72	0	
1973	00-00-73	0	
1974	00-00-74	0	
1975	09-08-75	200	
1976	05-04-76	297	
1977	09-11-77	578	
1978	01-15-78	364	
1979	07-20-79	940	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1962-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
392	672	868	1,120	1,300	1,490

WEIGHTED SKEW (LOGS)= -0.43
MEAN (LOGS)= 2.57
STANDARD DEV. (LOGS)= 0.30

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
21.8	5.5	1,280	0.0	2.0	6.7	1.5	3.9

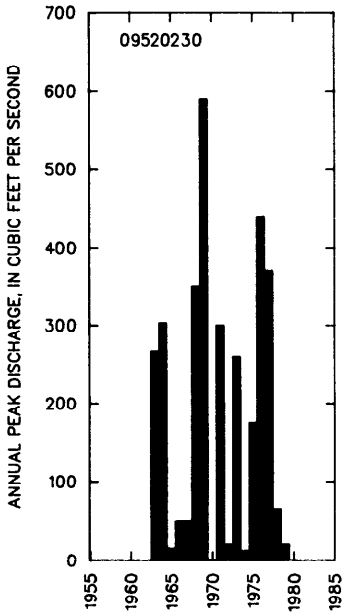
09520230 CRATER RANGE WASH NEAR AJO, AZ

LOCATION.--Lat 32°33'44", long 112°52'37", in NW¼NW¼ sec.15, T.10 S., R.6 W., Maricopa County, Hydrologic Unit 15070202, at State Highway 85, 4.1 mi north of Maricopa-Pima County line, and 13.5 mi north of Ajo.

DRAINAGE AREA.--1.49 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-06-63	267	
1964	10-19-63	303	
1965	02-06-65	15	ES
1966	09-13-66	50	ES
1967	07-15-67	50	ES
1968	07-00-68	350	
1969	09-04-69	590	
1970	00-00-70	0	
1971	09-00-71	300	
1972	08-12-72	20	
1973	02-22-73	260	
1974	08-04-74	12	ES
1975	10-00-74	175	
1976	09-24-76	440	
1977	11-15-76	370	
1978	01-15-78	65	ES
1979	02-20-79	20	ES



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-79

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
102	329	587	1,060	1,540	2,130

WEIGHTED SKEW (LOGS)= -0.25
MEAN (LOGS)= 1.98
STANDARD DEV. (LOGS)= 0.63

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
69.3	2.5	1,280	0.0	1.0	6.6	1.5	3.9

09520300 ALAMO WASH TRIBUTARY NEAR AJO, AZ

LOCATION.--Lat 32°06'00", long 112°46'15", in SW¼ sec.22, T.15 S., R.5 W. (unsurveyed), Pima County, Hydrologic Unit 15070203, at State Highway 85, 20 mi southeast of Ajo.

DRAINAGE AREA.--0.90 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-15-63	375		1976	09-25-76	230	
1964	09-09-64	187		1978	10-06-77	[1]135	
1965	10-16-64	74		1979	00-00-79	92	
1966	00-00-66	261		1980	00-00-80	92	
1967	08-00-67	103		1982	10-01-81	104	
1968	08-02-68	74		1983	07-21-83	98	
1969	08-14-69	370		1984	08-00-84	250	
1970	08-02-70	210		1985	00-00-85	0	
1971	00-00-71	5.0	ES	1986	07-21-86	210	
1972	08-31-72	510		1987	09-23-87	240	
1973	08-00-73	150		1988	00-00-88	0	
1974	00-00-74	0		1989	10-14-88	125	
1975	09-08-75	380					

[1]Highest since 1976.

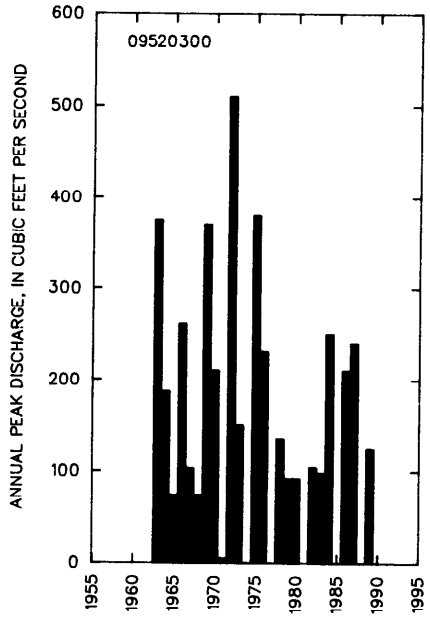
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1978-80, 1982-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50	100†
50%	20%	10%	4%	2%	1%
147	260	350	481	590	710

WEIGHTED SKEW (LOGS)= 0.00
MEAN (LOGS)= 2.17
STANDARD DEV. (LOGS)= 0.29

† Reliability of values in column is uncertain, and potential errors are large.



BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
64.0	2.5	2,040	0.0	2.0	9.7	1.7	4.2

09520350 MOHAWK PASS WASH AT MOHAWK, AZ

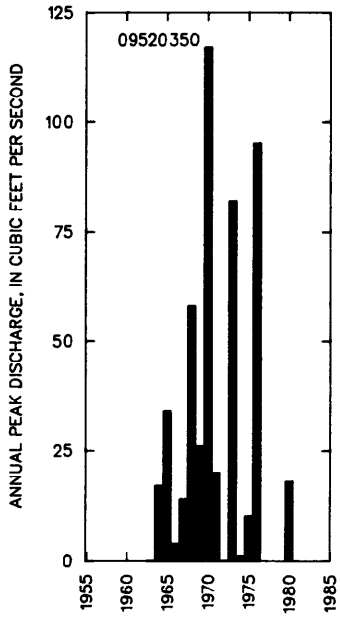
LOCATION.--Lat 32°43'44", long 113°44'30", in SE¼SW¼ sec.17, T.8 S., R.14 S., Yuma County, Hydrologic Unit 15070203, at Southern Pacific Railroad crossing, 0.6 mi east of Mohawk.

DRAINAGE AREA.--0.09 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	0	
1964	10-17-63	17	
1965	04-04-65	34	
1966	02-07-66	4	
1967	09-02-67	14	
1968	00-00-68	58	
1969	09-05-69	26	
1970	08-01-70	117	
1971	09-29-71	20	
1972	00-00-72	0	
1973	10-06-72	82	
1974	07-00-74	1.0	LT
1975	09-00-75	10	LT
1976	09-25-76	95	
1980	00-00-80	[1]18	HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
20.2	52.4	85.7	145	202	273

WEIGHTED SKEW (LOGS)= -0.04
MEAN (LOGS)= 1.30
STANDARD DEV. (LOGS)= 0.50

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
707	0.49	601	0.0	1.0	4.9	1.4	3.6

09520400 LIGURTA WASH AT LIGURTA, AZ

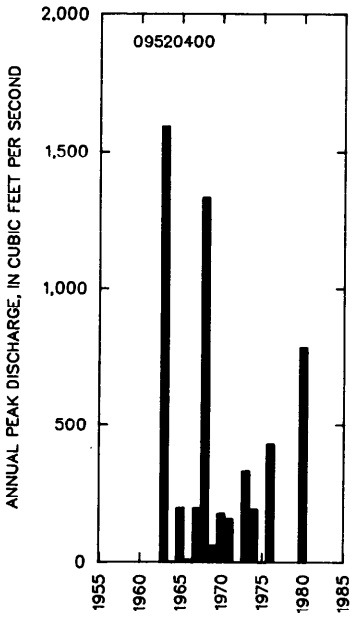
LOCATION.--Lat 32°40'33", long 114°17'38", in NW¼NW¼ sec.2, T.9 S., R.20 W., Yuma County, Hydrologic Unit 15070201, at U.S. Highway 80 at Ligurta, and 9.0 mi west of Wellton.

DRAINAGE AREA.--1.99 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	09-17-63	1,590	
1964	08-01-64	2.0	ES
1965	02-06-65	195	
1966	11-16-65	8.0	
1967	09-02-67	194	
1968	07-27-68	1,330	
1969	08-13-69	58	
1970	02-10-70	175	
1971	09-29-71	156	
1972	00-00-72	0	
1973	08-05-73	330	
1974	09-03-74	190	
1975	00-00-75	0	
1976	09-25-76	430	
1980	00-00-80	[1]780	HP

[1]Highest since 1976.



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76, 1980

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
182	548	980	1,820	2,730	3,930

WEIGHTED SKEW (LOGS)=	0.03
MEAN (LOGS)=	2.26
STANDARD DEV. (LOGS)=	0.57

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
127	2.0	395	0.0	2.0	4.0	1.4	3.6

RIO SONOYTA BASIN

SAN SIMON WASH BASIN

09535100 SAN SIMON WASH NEAR PISINIMO, AZ

LOCATION.--Lat 32°02'39", long 112°22'13", in SE¼ sec.9, T.16 S., R.1 W. (unsurveyed), Pima County, Hydrologic Unit 15080101, in Papago Indian Reservation, on the right bank about 100 ft downstream from road, just upstream from Gu Vo Wash, and 3.2 mi west of Pisinimo.

DRAINAGE AREA.--569 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1972	08-09-72	1,080
1973	10-19-72	1,930
1974	07-29-74	1,370
1975	09-07-75	1,950
1976	09-24-76	12,500
1977	08-08-77	720
1978	09-07-78	473
1979	11-11-78	512
1980	08-13-80	101
1981	07-12-81	2,020
1982	08-25-82	1,780
1983	09-29-83	688
1984	08-17-84	8,600
1985	07-19-85	790
1986	07-21-86	943
1987	08-11-87	641
1988	08-29-88	1,740
1989	10-15-88	1,420

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
17.4	39.4	2,250	0.0	0.0	10.0	1.8	4.2

RIO SONOYTA BASIN

SAN SIMON WASH BASIN

09535100 SAN SIMON WASH NEAR PISINIMO, AZ--Continued.

MEAN MONTHLY AND ANNUAL DISCHARGES 1973-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	44	0.00	7.3	14	2.0	15.2
NOVEMBER	14	0.00	1.9	4.0	2.1	4.0
DECEMBER	9.0	0.00	0.76	2.2	2.8	1.6
JANUARY	8.0	0.00	1.3	2.4	1.8	2.7
FEBRUARY	6.6	0.00	0.83	2.1	2.5	1.7
MARCH	8.5	0.00	1.2	2.7	2.3	2.5
APRIL	0.20	0.00	0.02	0.05	2.9	0.0
MAY	2.0	0.00	0.12	0.48	4.1	0.2
JUNE	0.02	0.00	0.00	0.00	4.1	0.0
JULY	40	0.00	8.8	10	1.1	18.3
AUGUST	93	0.01	14	26	1.9	29.0
SEPTEMBER	140	0.00	12	33	2.8	24.8
ANNUAL	15	0.13	4.0	4.1	1.0	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1973-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1972-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1,220	2,770	4,430	7,540	10,800	15,200

WEIGHTED SKEW (LOGS)= 0.46
MEAN (LOGS)= 3.12
STANDARD DEV. (LOGS)= 0.40

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1973-89

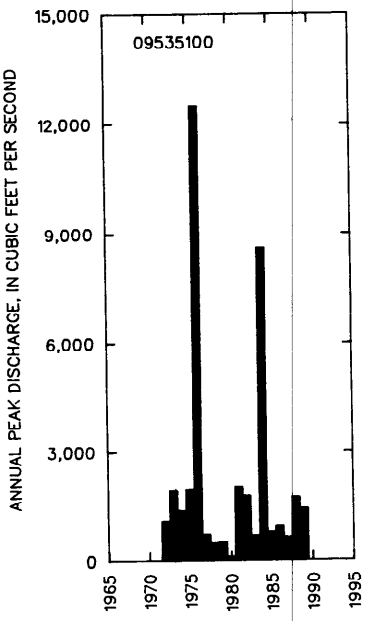
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	375	938	1,490	2,420	3,290	4,320
3	163	414	655	1,050	1,400	1,800
7	75	188	293	458	602	763
15	38	93	141	212	270	331
30	22	51	73	101	122	141
60	14	31	43	57	67	76
90	10	22	30	38	43	48

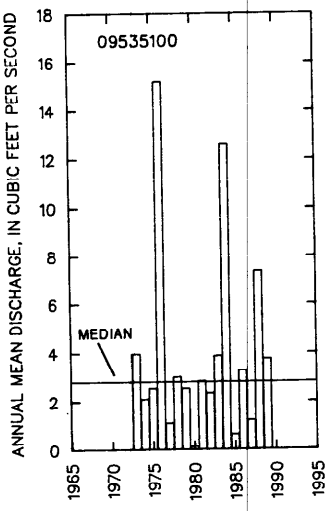
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1973-89

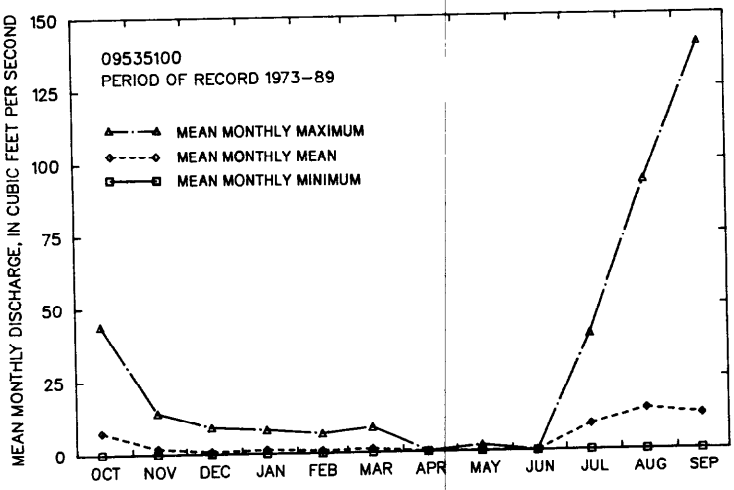
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
85	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09535100 SAN SIMON WASH NEAR PISINIMO, AZ--CONTINUED







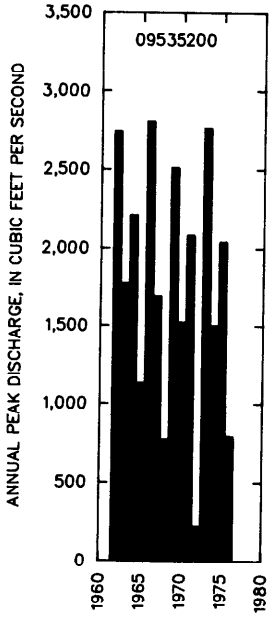
09535200 LITTLE TUCSON WASH AT SELLS, AZ

LOCATION.--Lat 31°54'55", long 111°52'42", in SE¼ sec.25, T.17 S., R.4 E., Pima County, Hydrologic Unit 15080101, at Sells.

DRAINAGE AREA.--26.8 mi^2 contributing drainage area not determined.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1962	09-26-62	2,740
1963	00-00-63	1,770
1964	07-29-64	2,210
1965	08-11-65	1,130
1966	09-13-66	2,800
1967	08-07-67	1,690
1968	12-19-67	770
1969	07-22-69	2,510
1970	09-06-70	1,520
1971	08-19-71	2,080
1972	08-00-72	220
1973	10-18-72	2,760
1974	09-22-74	1,500
1975	09-05-75	2,040
1976	00-00-76	790



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50	100
50%	20%	10%	4%	2%	1%
-----	-----	-----	-----	-----	-----

WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
49.9	10.2	2,560	0.0	3.0	11.8	2.1	4.6

09535300 VAMORI WASH AT KOM VO, AZ

LOCATION.--Lat 31°57'04", long 112°20'50", in NW¼ sec.14, T.17 S., R.1 W (unsurveyed), Pima County, Hydrologic Unit 15080101, in Papago Indian Reservation, on right bank 200 ft downstream from road crossing, 0.6 mi south of Kom Vo (Santa Cruz Village) and 5 mi upstream from mouth.

DRAINAGE AREA.--1,250 mi^2, approximately, of which about 250 mi^2 is in Mexico.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1972	08-10-72	214
1973	10-20-72	1,880
1974	09-22-74	689
1975	09-00-75	751
1976	09-26-76	1,650
1977	08-14-77	325
1978	08-13-78	808
1979	01-17-79	575
1980	08-15-80	469
1981	09-05-81	769
1982	08-26-82	576
1983	07-23-83	982
1984	10-03-83	10,400
1985	07-19-85	630
1986	08-29-86	960
1987	07-31-87	762
1988	08-29-88	768
1989	07-28-89	453

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
14.1	64.4	2,699	1.6	0.0	12.5	2.2	4.5

09535300 VAMORI WASH AT KOM VO, AZ--Continued.

MEAN MONTHLY AND ANNUAL DISCHARGES 1973-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	463	0.00	37	112	3.0	29.7
NOVEMBER	37	0.00	4.6	11	2.3	3.7
DECEMBER	26	0.00	3.5	6.7	1.9	2.8
JANUARY	41	0.00	7.8	15	1.9	6.2
FEBRUARY	33	0.00	4.6	11	2.3	3.7
MARCH	28	0.00	2.9	7.2	2.5	2.3
APRIL	0.49	0.00	0.03	0.12	4.0	0.0
MAY	0.49	0.00	0.06	0.15	2.4	0.0
JUNE	0.07	0.00	0.00	0.02	4.1	0.0
JULY	46	0.00	16	14	0.88	12.9
AUGUST	106	0.73	32	28	0.88	25.9
SEPTEMBER	103	0.00	16	25	1.5	12.7
ANNUAL	52	0.97	10	12	1.1	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1973-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1						
3						
7						
14						
30						
60						
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
745	1,550	2,360	3,820	5,320	7,250

WEIGHTED SKEW (LOGS)= 0.51
MEAN (LOGS)= 2.90
STANDARD DEV. (LOGS)= 0.36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1973-89

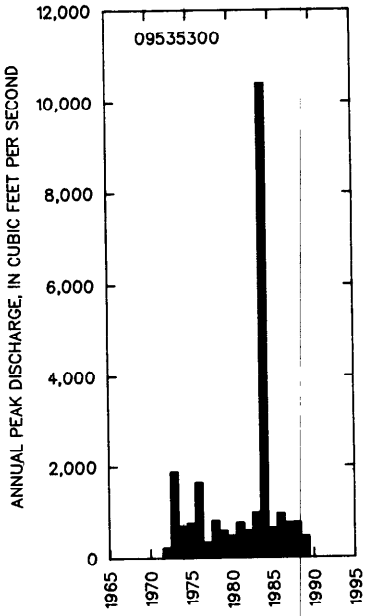
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	359	954	1,790	3,860	6,700	11,400
3	232	622	1,140	2,330	3,850	6,220
7	122	304	545	1,100	1,820	2,960
15	67	161	277	526	826	1,270
30	45	103	164	277	393	545
60	32	70	105	158	206	259
90	24	51	74	107	135	166

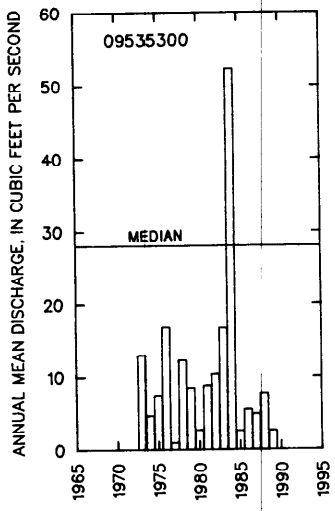
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1973-89

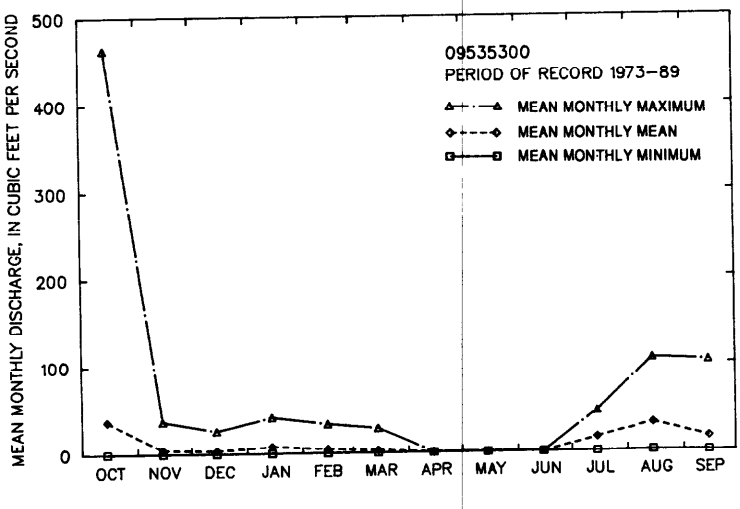
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
248	32	4.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09535300 VAMORI WASH AT KOM VO, AZ--CONTINUED







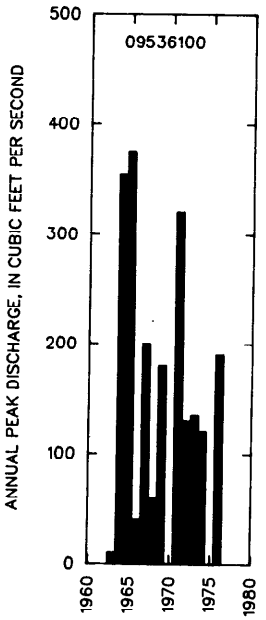
09536100 PITCHFORK CANYON TRIBUTARY NEAR FORT GRANT, AZ

LOCATION.--Lat 32°35'20", long 109°54'40", in SE¼ sec.5, T.10 S., R.24 E., Graham County, Hydrologic Unit 15050201, at State Highway 266, 3 mi southeast of Fort Grant.

DRAINAGE AREA.--0.81 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	00-00-63	10	LT
1964	07-24-64	354	
1965	08-15-65	375	
1966	08-07-66	40	ES
1967	08-00-67	200	
1968	08-20-68	60	
1969	00-00-69	180	
1970	00-00-70	0	
1971	09-08-71	320	
1972	08-26-72	130	
1973	10-15-72	135	
1974	07-16-74	120	
1975	00-00-75	0	
1976	00-00-76	190	



MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
144	247	323	425	506	589

WEIGHTED SKEW (LOGS)=	-0.23
MEAN (LOGS)=	2.15
STANDARD DEV. (LOGS)=	0.29

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

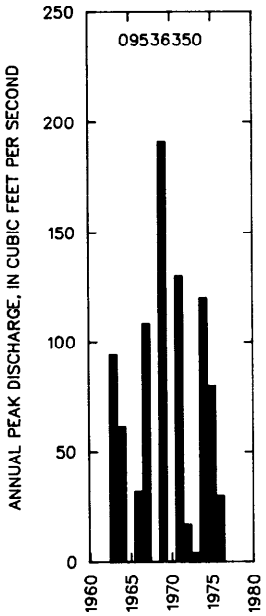
MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
459	1.8	5,210	0.0	3.0	15.0	2.1	3.8

WILLCOX PLAYA BASIN

09536350 SURPRISE CANYON NEAR DOS CABEZAS, AZ

LOCATION.--Lat 32°00'40", long 109°21'12", in SW¼ sec.25, T.16 S., R.29 E., Cochise County, Hydrologic Unit 15050201, at main road through Chiricahua National Monument, 0.4 mi north of ranger station, and 19 mi southeast of Dos Cabezas.

DRAINAGE AREA.--0.65 mi^2.



ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1963	08-00-63	94	
1964	08-14-64	61	
1965	00-00-65	0	
1966	08-18-66	32	
1967	07-26-67	108	
1968	00-00-68	0	
1969	07-15-69	191	
1970	00-00-70	0	
1971	08-19-71	130	ES
1972	10-25-71	17	
1973	02-21-73	4.0	
1974	07-07-74	120	
1975	07-19-75	80	
1976	00-00-76	30	ES

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-76

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT

2	5	10	25	50†	100†
50%	20%	10%	4%	2%	1%
44.9	113	172	261	335	413

WEIGHTED SKEW (LOGS)= -0.51
MEAN (LOGS)= 1.61
STANDARD DEV. (LOGS)= 0.52

† Reliability of values in column is uncertain, and potential errors are large.

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
1,040	1.7	6,280	100	1.0	18.0	2.2	4.4

SULPHUR SPRING VALLEY

WHITE WATERDRAW BASIN

09537200 LESLIE CREEK NEAR McNEAL, AZ

LOCATION.--Lat 31°35'24", long 109°30'30", in SE¼NE¼ sec.20, T.21 S., R.28 E., Cochise County, Hydrologic Unit 15080301, on right bank 10 mi east of McNeal.

DRAINAGE AREA.--79.1 mi^2.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)
1970	08-10-70	345
1971	08-12-71	1,760
1972	07-15-72	314
1973	10-20-72	255
1974	07-20-74	162
1975	07-23-75	132
1976	10-21-75	1.0
1977	08-08-77	563
1982	08-15-82	30
1983	02-04-83	322
1984	07-21-84	4,600
1985	10-03-84	709
1986	08-18-86	658
1987	08-05/87	307
1988	07-20/88	250
1989	08-06/89	71

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
62.1	14.5	5,360	30.0	2.0	18.0	2.0	4.0

09537200 LESLIE CREEK NEAR MCNEAL, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1970-77, 1983-89

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	31	0.00	3.4	7.8	2.3	22.7
NOVEMBER	1.8	0.00	0.84	0.63	0.75	5.6
DECEMBER	1.8	0.02	0.75	0.59	0.78	5.0
JANUARY	2.1	0.02	0.72	0.65	0.90	4.8
FEBRUARY	3.2	0.02	0.77	0.82	1.1	5.1
MARCH	1.6	0.02	0.55	0.46	0.83	3.7
APRIL	1.7	0.00	0.53	0.49	0.93	3.5
MAY	1.4	0.00	0.45	0.43	0.95	3.0
JUNE	1.2	0.00	0.38	0.37	0.97	2.5
JULY	26	0.00	2.5	6.6	2.7	16.4
AUGUST	17	0.00	3.2	4.5	1.4	21.0
SEPTEMBER	4.9	0.00	1.0	1.3	1.3	6.7
ANNUAL	6.6	0.07	1.3	1.6	1.3	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1971-77, 1984-89

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1970-77, 1982-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
449	1,360	2,440	4,560	6,850	9,880

WEIGHTED SKEW (LOGS)= 0.09
MEAN (LOGS)= 2.50
STANDARD DEV. (LOGS)= 0.57

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1970-77, 1983-89

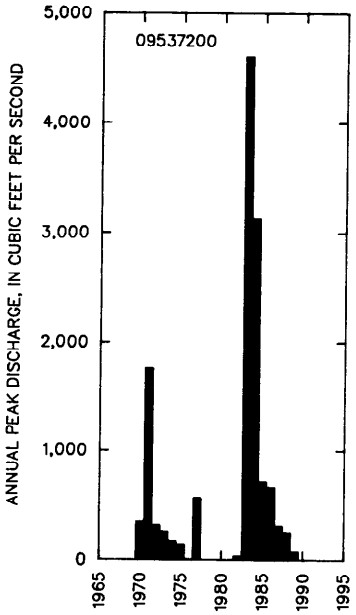
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	52	171	261	362	423	471
3	20	70	117	184	235	284
7	8.7	30	52	88	120	156
15	5.0	16	27	47	65	87
30	3.0	8.9	15	27	39	53
60	1.9	5.1	8.6	15	21	28
90	1.5	3.8	6.2	10	15	20

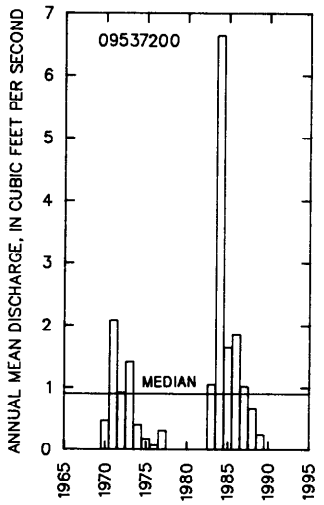
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-77, 1983-89

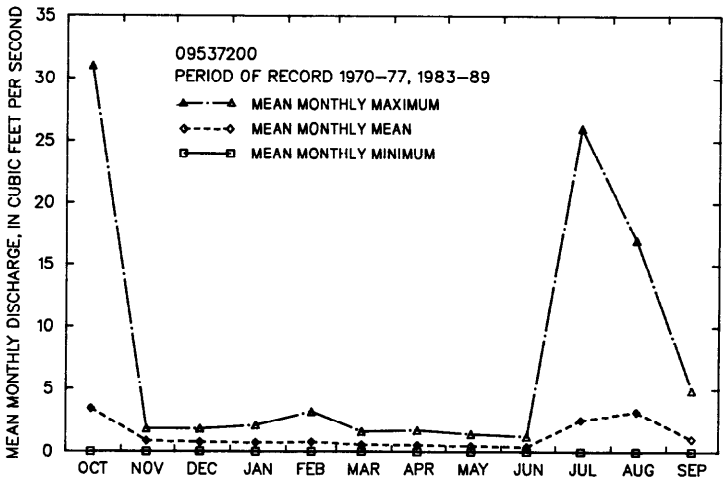
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
8.9	1.8	1.6	1.4	1.1	0.80	0.62	0.48	0.33	0.21	0.14	0.05	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09537200 LESLIE CREEK NEAR McNEAL, AZ--CONTINUED







SULPHUR SPRING VALLEY

WHITEWATER DRAW BASIN

09537500 WHITEWATER DRAW NEAR DOUGLAS, AZ

LOCATION.--Lat 31°21'08", long 109°35'04", in SW¼SE¼ sec.10, T.24 S., R.27 E., Cochise County, Hydrologic Unit 15080301, on downstream side of pier of bridge on U.S. Highway 80, 1.5 mi upstream from international boundary and 2 mi west of Douglas.

DRAINAGE AREA.--1,023 mi^2.

REMARKS.--Irrigation of about 40,000 acres above station in 1978, by pumping from ground water. Whitewater Draw discharges into Gulf of California through Rio Yaqui in Mexico. Records show flow at international boundary except for smelter wastewater, which enters stream below station.

Records furnished by International Boundary and Water Commission 1983-89.

ANNUAL PEAK DISCHARGE

WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES	WATER YEAR	DATE	ANNUAL PEAK DISCHARGE (FT^3/S)	DISCHARGE CODES
1916	07-11-16	1,600		1958	09-23-58	1,280	
1917	08-09-17	720		1959	07-27-59	2,760	
1918	07-15-18	1,050		1960	07-31-60	676	
1919	07-27-19	4,050		1961	07-29-61	1,380	
1920	11-23-19	3,400		1962	07-28-62	687	
1930	09-07-30	1,700		1963	08-01-63	1,260	
1931	08-10-31	3,450		1964	07-31-64	1,370	
1932	07-31-32	1,800		1965	09-04-65	1,500	
1933	09-20-33	1,730		1966	07-29-66	3,760	
1934	08-00-34	3,100		1967	08-05-67	2,930	
1935	09-01-35	2,900		1968	09-01-68	1,280	
1936	09-11-36	2,000	ES	1969	08-25-69	1,130	
1937	08-19-37	2,770		1970	08-17-70	2,260	
1938	08-07-38	1,990		1971	08-11-71	1,700	
1939	08-05-39	2,690		1972	08-13-72	2,540	
1940	06-24-40	2,750		1973	07-11-73	800	
1941	09-29-41	2,750		1974	08-02-74	936	
1942	09-13-42	2,300		1975	07-23-75	1,020	
1943	06-30-43	2,750		1976	07-24-76	654	
1944	08-16-44	2,190		1977	08-19-77	625	
1945	07-31-45	3,100		1978	10-09-77	3,020	
1946	10-09-45	1,440		1979	07-20-79	1,100	
1947	07-08-47	1,580		1980	08-13-80	467	
1948	07-22-48	3,170		1981	07-19-81	753	
1949	07-18-49	1,790		1982	08-30-82	542	
1950	07-19-50	3,400		1983	07-24-83	170	
1951	08-20-51	1,230		1984	10-01-83	891	
1952	06-02-52	1,670		1985	09-29-85	1,420	
1953	07-07-53	2,950		1986	08-18-86	1,540	
1954	08-09-54	3,680		1987	08-05-87	381	
1955	08-07-55	5,060		1988	08-26-88	172	
1956	08-27-56	513		1989	10-16-88	95	
1957	07-24-57	2,720					

BASIN CHARACTERISTICS

MAIN CHANNEL SLOPE (FT/MI)	STREAM LENGTH (MI)	MEAN BASIN ELEVATION (FT)	FORESTED AREA (PERCENT)	SOIL INDEX	MEAN ANNUAL PRECIPITATION (IN)	RAINFALL INTENSITY, 24-HOUR 2-YEAR (IN)	RAINFALL INTENSITY, 24-HOUR 50-YEAR (IN)
20.5	61.7	4,740	11.0	2.3	14.8	1.8	3.6

SULPHUR SPRING VALLEY

WHITEWATER DRAW BASIN

09537500 WHITEWATER DRAW NEAR DOUGLAS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1919, 1931-33, 1936-46, 1949-82

MONTH	MAXIMUM (FT^3/S)	MINIMUM (FT^3/S)	MEAN (FT^3/S)	STANDARD DEVIATION (FT^3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	99	0.00	4.9	15	3.1	4.4
NOVEMBER	9.9	0.00	0.85	1.7	2.0	0.8
DECEMBER	38	0.00	2.0	6.0	2.9	1.8
JANUARY	7.3	0.00	0.66	1.2	1.8	0.6
FEBRUARY	9.1	0.00	0.55	1.3	2.4	0.5
MARCH	4.8	0.00	0.49	0.79	1.6	0.4
APRIL	2.9	0.00	0.38	0.55	1.5	0.3
MAY	2.2	0.00	0.27	0.44	1.6	0.2
JUNE	27	0.00	2.1	5.9	2.8	1.9
JULY	342	0.00	38	55	1.5	34.2
AUGUST	235	0.00	48	58	1.2	43.3
SEPTEMBER	53	0.00	13	14	1.1	11.3
ANNUAL	33	0.32	9.3	6.9	0.75	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-33, 1937-47, 1949-82

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.02	0.00	0.00	0.00	0.00	0.00
90	0.06	0.00	0.00	0.00	0.00	0.00
120	0.25	0.00	0.00	0.00	0.00	0.00
183	0.52	0.10	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916-20, 1930-89

DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,640	2,840	3,620	4,540	5,170	5,750

WEIGHTED SKEW (LOGS)= -0.70
MEAN (LOGS)= 3.17
STANDARD DEV. (LOGS)= 0.32

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1919, 1931-33, 1936-46, 1949-82

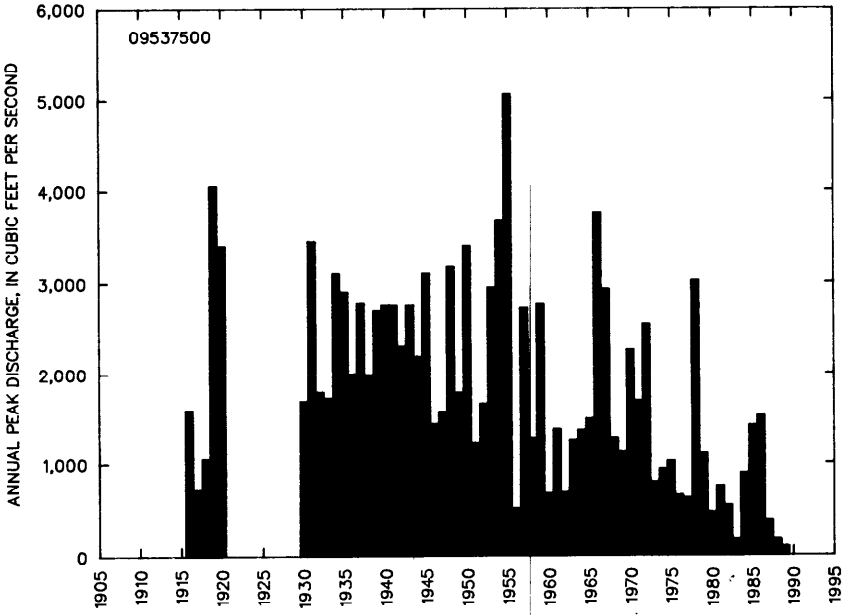
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT^3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	623	1,020	1,290	1,600	1,820	2,030
3	327	574	740	945	1,090	1,230
7	176	328	437	579	684	788
15	102	198	269	362	433	503
30	63	129	181	253	310	370
60	39	76	101	133	156	177
90	29	54	70	89	101	112

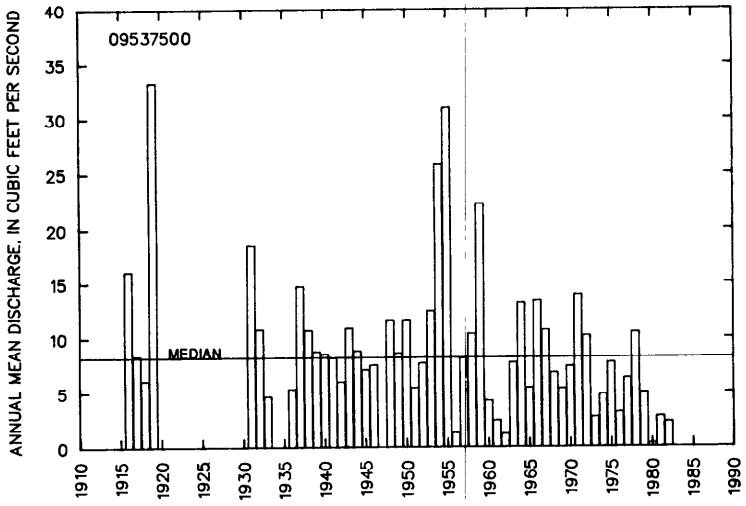
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1919, 1931-33, 1936-46, 1949-82

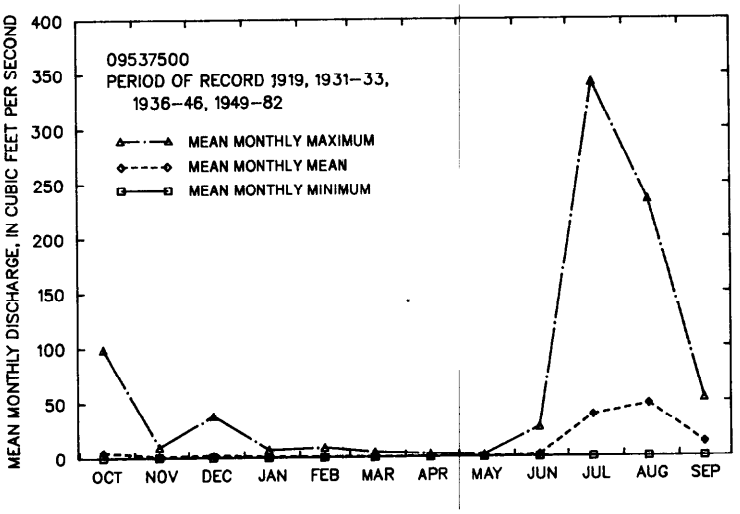
DISCHARGE, IN FT^3/S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
248	22	3.4	1.4	1.0	0.66	0.44	0.25	0.11	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00

† Reliability of values in column is uncertain, and potential errors are large.

09537500 WHITEWATER DRAW NEAR DOUGLAS, AZ--CONTINUED







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