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Salt-Gila River

Land Use and Structures Inventory

Granite Reef Dam to Gillespie Dam

Prepared by



The Flood Control District of Maricopa County

March 1, 1994

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Purpose

This report provides an inventory of various structures, utilities, and land use conditions along the Salt and Gila Rivers from Granite Reef Dam to Gillespie Dam. It has been prepared to provide input and support to the U.S. Army Corps of Engineers (COE) in its development of an Operations Manual for flood control space behind New Roosevelt Dam.

This report also serves as a single reference for data regarding the Salt and Gila Rivers. If used in emergency planning and operations, it is recommended that the information contained herein be periodically reviewed and updated.

The information contained in this report has been compiled by the Flood Control District of Maricopa County from a variety of sources, including materials published or provided by Salt River Project, United States Geological Survey, Maricopa County Department of Transportation, Maricopa County Department of Emergency Management, various private consulting firms, sand and gravel operators, and utility companies. These sources will be subject to future revision, without notice to the Flood Control District, and the District may or may not attempt to update or amend this report.

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Description of the Study Area

Location

The Salt-Gila River study area is located in Maricopa County in south-central Arizona and extends approximately 72.5 miles (117 km) from Granite Reef Dam on the Salt River to the Old U.S. 80 Bridge, just south of Gillespie Dam, on the Gila River. The map on the following page provides an overview of the study area within Maricopa County. The study includes, as a minimum, those areas inundated by 100-year floodwaters based on existing-condition flows.

Communities within the study area include:

- Salt River Pima-Maricopa Indian Community
- City of Mesa
- City of Tempe
- City of Phoenix
- Gila River Indian Community
- City of Avondale
- City of Goodyear
- Town of Buckeye
- Portions of Unincorporated Maricopa County

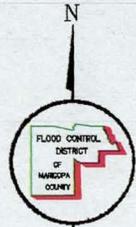
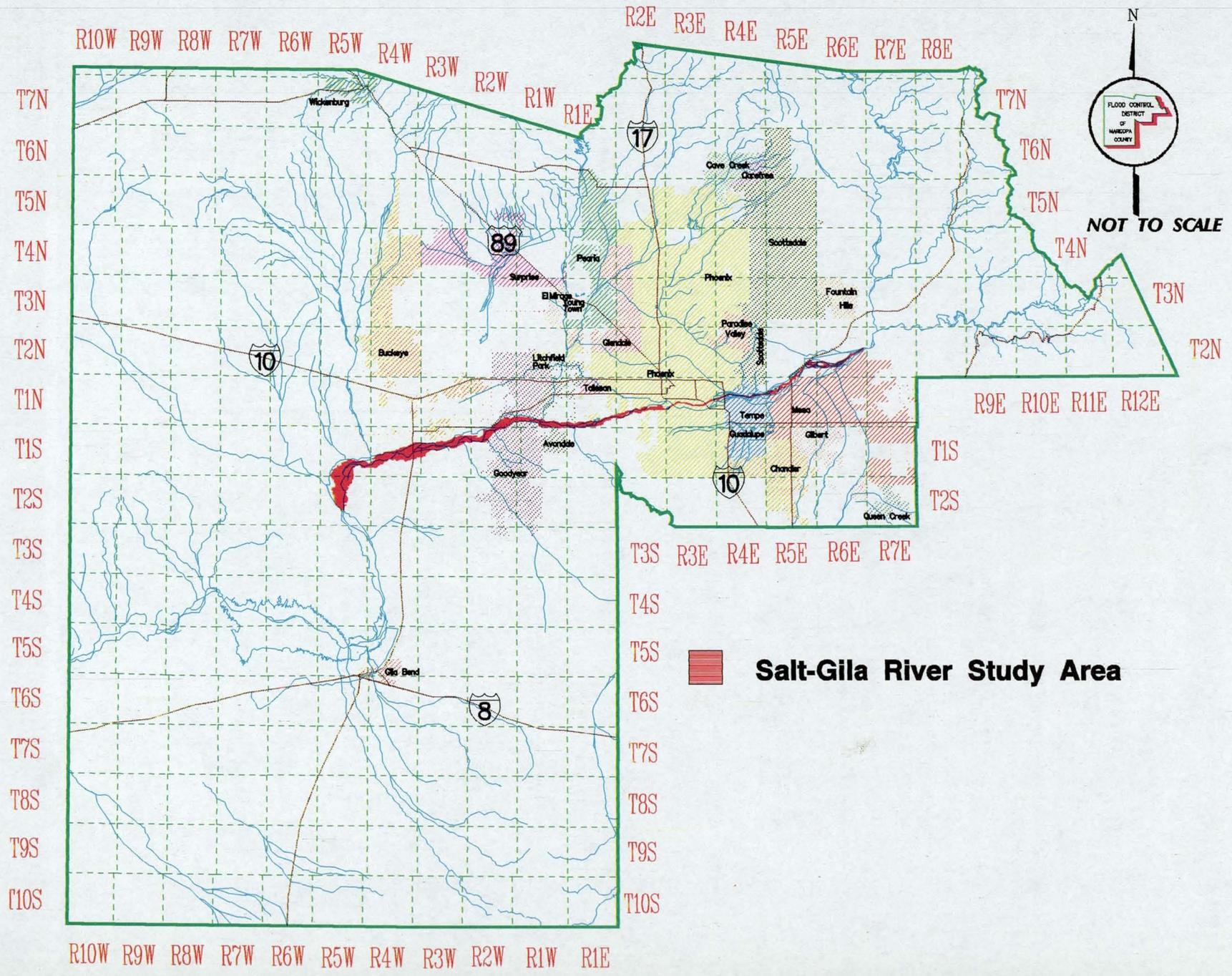
Surface Water

The Salt River remains dry throughout most of the year and along much of its course from Granite Reef Dam to the confluence with the Gila, although discharges of effluent from several wastewater treatment plants result in a small perennial flow beginning at 23rd Avenue and continuing downstream through the study reach.

Land Use

The primary land uses in and around the river are presented on the land use map referenced in Appendix D and provided as a separate document. Land use data is based on information obtained from the Salt River Project (SRP) dated 1989 and is printed from the Flood Control District of Maricopa County's (District) HIS database file. The District's detailed land use database files end at Range 2 West. From this point downstream, land use is based on United States Geological Survey (USGS) land use maps (unknown date). Aerial photographic background is from Landiscor and dated January 1993.

Land use data shown is intended for broad representational purposes only. Exceptions to the identified land use may exist within each and every land use type. Identified floodplain



NOT TO SCALE

 **Salt-Gila River Study Area**

limits reflect the most current revision (December 1993) of the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA). Some bridges and channelization may not be reflected in the FEMA floodplain delineation. This is particularly true of the area from 40th Street to McClintock Drive.

Sand and Gravel Activities: Sand and gravel activities occur in the river from the Salt River Pima-Maricopa Indian Community at approximately the Higley Road alignment to approximately 1.5 miles (2.4 km) west of Miller Road in Buckeye.

Landfills: There are several active landfills along the river. Their locations are shown on the land use map referenced in Appendix D. In addition, there are several dozen abandoned or closed landfill and/or dump sites from approximately the Mesa Drive alignment on the Salt River Pima-Maricopa Indian Community to El Mirage Road in Avondale. Known materials contained in these landfill/dump sites include materials such as industrial waste products, household garbage, tires, and vegetative waste. One abandoned landfill, which could clearly be identified in the January 1993 flooding, was a site located just upstream of El Mirage Road. During the flooding, this landfill maintained its form and diverted flows to both sides. This site is shown on the land use maps discussed in Appendix D.

Additional sites may be found in a report prepared by CEC/WRA, Inc., discussed below.

Superfund Sites: The environmental consulting firm of CEC/WRA, Inc., has identified three superfund sites of significance along the Salt-Gila River. They are the Indian Bend Wash Superfund Site, the 19th Avenue Landfill, and the Phoenix Goodyear Airport. Approximate locations of these sites are shown on the land use maps discussed in Appendix D.

In addition to the superfund sites, CEC/WRA, Inc., has identified other sites of environmental significance which appear on various database files. The information gathered by CEC/WRA, Inc., is contained in a report prepared for the District entitled "Revised Report of Environmental Database Search of the Salt and Gila Rivers, Maricopa County, Arizona, Assignment FCD-050." This report is available through the District.

Treatment Plants: Two wastewater treatment plants are located within the current 100-year floodplain limits. The plant at 91st Avenue on the north side of the Salt River is operated by the City of Phoenix and serves the Cities of Phoenix, Glendale, Mesa, Tempe, Scottsdale, and Youngtown. High flow rates in the river (those in excess of approximately 100,000 cfs) present problems with the discharge of effluent from the treatment plant. Simons, Li & Associates, Inc., is currently under contract with the City of Phoenix to determine alternatives to help remedy this problem. Their current proposal recommends raising the top of bank elevation of the secondary treatment basin to prevent effluent from backing up into the plant. Additionally, Simons, Li & Associates, Inc., is also under contract with the City of Phoenix to develop 100-year bank protection plans to protect the facility from flows in the Salt River.

The second plant, the Buckeye Wastewater Treatment Plant, located south of Belloat Road and approximately two-thirds of a mile east of Miller Road on the north bank of the Gila River, serves the Town of Buckeye. This plant is located within the floodplain fringe.

Schools: Two schools are located within the 100-year flood limits of the Gila River. The first, the Liberty School, located on the north side of Maricopa County Highway 85 (MC 85), approximately one-half mile west of Jackrabbit Trail, is in a backwater area. The second, the Arlington School, located approximately one-quarter mile south of Cactus Rose Road on 339th Avenue, is situated in the floodway of the Gila River and, thereby, is subject to more frequent flooding. The January 1993 flood, with a measured peak discharge of 137,300 cfs (3888 m³/sec) caused over 1 foot (0.3 m) of flooding in the school.

Phoenix International Raceway: Phoenix International Raceway (PIR) is located on the south side of the Gila River immediately west of 115th Avenue. The primary access route to PIR is currently via 115th Avenue which is an at-grade crossing of the Gila River with several small culverts to pass the effluent discharge from the 91st Avenue Wastewater Treatment Plant. The next closest crossing of the river, El Mirage Road, is also an at-grade crossing with several small culverts. These two access routes are closed during relatively minor flows in the river. During closures, the Bullard Avenue and Estrella Parkway bridges provide the only access via Indian Springs Road to PIR from the north, thereby creating substantial traffic jams on these two routes.

PIR leases land from the State of Arizona for a parking area directly north of the grandstand and in the floodway of the Gila River. The January 1993 flooding completely destroyed this parking lot and flooded a parking area located immediately west of the grandstand and east of El Mirage Road, thereby contributing to a parking problem as well as traffic congestion.

To remedy the traffic problem, the Maricopa County Department of Transportation (MCDOT) is currently investigating the possibility of constructing a bridge in the general vicinity of 115th Avenue. The project is currently at the design concept stage. (See *Bridges, 115th or 116th Avenue Bridge*, below.)

Wildlife Areas: Three wildlife areas maintained by the Arizona Game and Fish Department are present on the Gila River. The Robbins Butte Wildlife Area is located just downstream of the SR 85 Bridge southwest of Buckeye. The Mummy Wildlife Area is located in the Arlington area where the Gila River turns sharply to the south. The Arlington Wildlife Area is located just north of Gillespie Dam.

In addition to these three areas, Arizona Game and Fish Department manages hundreds of acres of state- and federally-owned land within the Fred J. Weiler Greenbelt extending west of 115th Avenue to Gillespie Dam.

Clearing and Low Flow Channel: The District currently maintains a 1000-foot (304.8 m) clearing from Gillespie Dam to 91st Avenue—a distance of about 36 miles (58 km). Generally centered with the 1000-foot clearing was a low flow pilot channel, which was destroyed along 85 percent of its length during the January 1993 flood.

The trapezoidal pilot channel extended from Gillespie Dam to Rainbow Road, a distance of approximately 18 miles (29 km), and from Tuthill Road Bridge to Sarival Road, about 5 miles (8 km). The pilot channel was earthen, with an 80 to 100-foot (24.4 to 30.5 m) bottom width and 2:1 sideslopes.

Although it was destroyed, the pilot channel appeared to have performed its intended function of training the thalweg during a flood event. The District is attempting to obtain permission from the U.S. Army Corps of Engineers to restore access to the channel area. In addition, the District is pursuing a 404 Permit for the "Managed Vegetative Corridor and Pilot Channel" (MVCPC). Two studies will be initiated by the District: one will evaluate the MVCPC and the other will be a Salt-Gila Management Policy Study.

Bridges

The table of Salt-Gila River Crossings (Appendix B) lists the existing bridges within the study reach and their capacities. The table is a compilation of data obtained from Maricopa County Department of Emergency Management and MCDOT. Capacities represent a "real world" scenario of the river where flows often breakout over the approaches and/or, structurally, the bridges were not constructed to withstand higher flows even though a HEC-2 model may indicate that a higher flow would pass beneath the bridge.

South Mountain Freeway (Loop 202) Bridge: Plans are currently underway by the Arizona Department of Transportation (ADOT) for the South Mountain Freeway. These plans will include a crossing of the Salt River in the general vicinity of 59th Avenue. Currently, construction of the bridge is unfunded and is not scheduled to begin before the year 2006. However, upcoming County elections could result in a scheduling change to have the bridge completed prior to 2006.

115th or 116th Avenue Bridge: MCDOT is currently considering the construction of a new bridge along the 115th or 116th Avenue alignment. The current design concept is for the bridge to span the river from approximately Monument Hill, on the south side of the river, to the District's Holly Acres Bank Stabilization Project (Holly Acres Levee) on the north side. The bridge's low chord elevation will be set above the base flood elevation but the north approach will become submerged when flows break out behind the Holly Acres Levee. Provided that all goes as planned and funding is secured, construction is scheduled to begin in Fiscal Year 1995. Construction is expected to take from nine months to one year. At this time, the preparation of construction drawings has not begun.

Estrella Parkway Bridge: Although the Estrella Parkway Bridge has nearly 100-year capacity, the bridge is often closed by significantly less than 100-year rainfall events. Flows exceed the capacity of a tailwater ditch owned by the Roosevelt Irrigation District and spill out onto the north end of Estrella Parkway just south of MC 85 (Buckeye Road) thereby forcing the closure of Estrella Parkway from MC 85 to Indian Springs Road, located along the south bank of the Gila River.

SR 85 Bridge: A new bridge is currently under construction by ADOT at this location on the Gila. This bridge will replace the existing bridge, which is significantly undersized. Flows of 137,300 cfs (3888 m³/sec), approximately the 20-year frequency storm, which occurred in January 1993, overtopped the existing bridge. The new crossing will consist of two parallel bridges with a design capacity of 245,000 cfs (6938 m³/sec)—the current 100-year flood.

Roads

Many roads of an east-west orientation are present in the current Salt-Gila 100-year floodplain. A list of these roads and their approximate lateral extent within the floodplain is given below. However, for simplification, only paved section line roads are included in the list.

McKellips Road: 0.3 mile (0.5 km) west of Country Club Drive to 0.3 mile (0.5 km) east of Pima Road.

McDowell Road: 0.7 mile (1.1 km) east of Alma School Road to Alma School Road.

Broadway Road: 0.3 mile (0.5 km) west of 27th Avenue to 35th Avenue.

Southern Avenue: 67th Avenue to 75th Avenue.

Southern Avenue: 0.2 mile (0.3 km) west of 107th Avenue to the Agua Fria River.

MC 85: 0.5 mile (0.8 km) west of Jackrabbit Trail to 0.3 mile (0.5 km) east of Rainbow Road.

Beloat Road: Tuthill Road to 0.8 mile (1.3 km) east of Miller Road.

Elliot Road: 0.6 mile (0.9 km) west of Tuthill Road to 0.7 mile (1.2 km) west of Tuthill Road.

Narramore Road: Palo Verde Road to 0.1 mile (0.2 km) west of Palo Verde Road.

Ray Road: The Hassayampa River to 0.2 mile (0.3 km) east of 331st Avenue.

Cactus Rose Road: 0.2 mile (0.3 km) east of Old U.S. Highway 80 to the Gila River.

Desert Rose Road: Old U.S. Highway 80 to the Gila River.

Future: Red Mountain Freeway: will be constructed along the south bank of the Salt River within the floodplain from the Pima Freeway to SR 87. Channel improvements will protect the Red Mountain Freeway from the 100-year flood.

Structures: Private

Conveyer Belts: Two conveyer belts used in sand and gravel operations span the Salt River, one at approximately 18th Street and one at approximately the 13th Avenue alignment. The belt at 18th Street survived the 1980 flooding of 170,000 cfs (4814 m³/sec) with only minor structural damage. During the January 1993 flooding of 124,000 cfs (3511 m³/sec) peak flows, however, two spans were lost to floodwaters. Calmat, the owner of the belt, speculates that debris from the failed new Mill Avenue Bridge, which was under construction at the time, sheered off the piles and caused the failure. The belt has since been re-built.

The belt at 13th Avenue suffered no damage during the 1980 or 1993 floods.

Gillespie Dam: Gillespie Dam is a privately-owned and operated concrete dam constructed in 1921 as a diversion dam for agricultural irrigation water supply. Over the years, a large amount of silt has accumulated behind the dam. During the January 1993 flooding on the Gila River, a section of the dam failed. Engineers hired by the owners, Paloma Ranches, are currently working with the Arizona Department of Water Resources to develop repair alternatives. To solve the immediate need for irrigation water, the owner has installed a temporary pumping plant downstream of the dam.

Structures: Public (other than District-owned)

20th Street Drain: ADOT currently maintains a drain which discharges into the Salt River at approximately the 20th Street alignment. This drain serves to convey stormwater from the I-10 tunnel.

At-Grade Crossings and Culverts: MCDOT currently maintains at-grade crossings at McKellips Road, 67th Avenue, 91st Avenue, 115th Avenue, El Mirage Road, and Airport Road. Of these crossings, low flow culverts are maintained by MCDOT at 67th Avenue, 91st Avenue, 115th Avenue, El Mirage Road and Airport Road. The crossing at Airport Road was destroyed during the January 1993 flooding and has not yet been restored, although funds have been budgeted for its restoration.

Scour Protection: MCDOT has developed design plans to provide scour protection for the bridges at Alma School Road and Tuthill Road. Severe scouring occurred during the January 1993 flooding. Protection measures should be constructed for both of these bridges during 1994.

Structures: District-Maintained

The District maintains several structures within the 100-year floodplain of the Salt-Gila River. All are labeled on the land use map referenced in Appendix D. Structures were shown somewhat beyond the limits of the 100-year floodplain but not necessarily to their

terminus. If more detail regarding the location is required, this information can be provided.

Alma School Drain (Tempe Wasteway): The Alma School Drain is a combination storm drain, irrigation waste channel, and flood control channel which discharges into the Salt River. The channel is concrete-lined for most of its length.

Salt River Channelization: The District will be responsible for operating and maintaining the Salt River channelization from 40th Street to McClintock Drive when appropriate easements are provided. Future intergovernmental agreements may also be approved for the District to maintain the channelization east to McClintock Drive.

Indian Bend Wash Outlet Channel: The outlet for Indian Bend Wash (IBW) is an unlined trapezoidal channel which conveys 100-year flows from the Indian Bend Wash Greenbelt Floodway to the Salt River. ADOT is currently constructing a drop structure in the IBW outlet at the Red Mountain Freeway crossing. Once completed, maintenance will become the responsibility of the District.

48th Street Drain: The 48th Street Drain is a concrete-lined trapezoidal channel which collects storm drainage, irrigation wastewaters, and floodwaters (50-year event) and conveys them to the Salt River via a rip-rapped outlet channel at the Interstate 10 bridges.

Old Cross Cut Canal: The Old Cross Cut Canal was constructed in the 1880s to transfer water between the Arizona Canal and the Grand Canal. It is seldom used for transfer, and is, instead, used periodically to discharge water from the Arizona Canal and from local storm drainage during rainstorms and floods. Drainage is discharged via a soil cement-lined channel to a large basin area and then through three box culverts under the Red Mountain Freeway to the Salt River in the vicinity of 50th Street.

Holly Acres—Bank Stabilization: The Holly Acres Bank Stabilization Project (Holly Acres Levee) was constructed in 1983/84 to protect from further erosion properties on the north side of the Gila River between El Mirage Road and approximately the 113th Avenue alignment. The project consists of a compacted earthen dike protected on both sides with rip-rap. It was designed to provide protection up to approximately 115,000 cfs (3256 m³/sec) with 3 feet (0.9 m) of freeboard—far less than the 100-year flow of 250,000 cfs (7080 m³/sec). During the flooding of January 1993, the levee was extended on the east end northward using sand bags. Flows of approximately 137,300 cfs (3680 m³/sec) did not overtop the levee.

Perryville Road—Bank Stabilization: The Perryville Road Bank Stabilization Project consists of rip-rap and gabion bank stabilization on the north side of the Gila River, near the intersection of the Citrus Road alignment and the Gila River. The stabilization serves to prevent further erosion of the riverbank which threatens crop fields, a portion of the Buckeye Irrigation District's canal, and MC 85 (Buckeye Road). The bank stabilization was constructed to the top of the existing bank. A portion that was damaged during the January 1993 flood is being rebuilt and raised to match the adjacent top of bank protection.

Irrigation Canals

Several irrigation canals are within the current 100-year floodplain of the Salt-Gila River. Canals within or directly adjacent to the floodplain have been shown on the land use map referenced in Appendix D. The approximate reach of each canal located within the existing 100-year floodplain is outlined below.

St. Johns Canal: The Agua Fria River to approximately 109th Avenue and 0.25 miles (0.4 km) east to 99th Avenue to 91st Avenue.

Buckeye Feeder: The Agua Fria River to 115th Avenue, approximately 0.5 miles (0.8 km) north of Southern Avenue.

Buckeye Canal: A 0.5 mile (0.8 km) section from 0.25 miles (0.4 km) east of Cotton Lane to 0.75 miles (1.2 km) east of Cotton Lane. And, from the Agua Fria River to Bullard Avenue.

Southern Extension of the Buckeye Canal: From Rainbow Road to 207th Avenue.

Arlington Canal: From the west side of Gillespie Dam north to 0.75 miles (1.2 km) south of the intersection of Agua Caliente Road and Old U.S. Highway 80. And, from the east bank of the Hassayampa River to approximately 1 mile (1.6 km) east of Miller Road on the north side of the Gila River.

Utilities

Various utilities are located within, or adjacent to, the current 100-year floodplain of the Salt-Gila River. A listing of utilities, general location, and other pertinent data is contained in Appendix C. Detailed maps are available from each utility company. The Flood Control District has many of these maps.

Appendix A

Available Data

Reports

- 1981 Report on Salt-Gila River Clearing, Gillespie Dam Analysis (John Carollo Engineers), May 21, 1981
- Design and Hydraulic Study for Reems Road Bridge - Estrella Development Project
- The Disastrous Southern California and Central Arizona Floods, and Mudslides of February 1980
- Draft Final Drainage Design Volume I: Report, East Papago Freeway, Priest Drive: Indian Bend Wash, Design Segment 5, RAM-600-5-308 (John Carollo Engineers), January 26, 1990
- Draft Final Drainage Design Volume II: Appendices, East Papago Freeway, Priest Drive: Indian Bend Wash, Design Segment 5, RAM-600-5-308 (John Carollo Engineers), January 26, 1990
- Draft Relocation of Old Tower Road Design Concept Report (BRW), February 10, 1992
- Final II Drainage Report, East Papago Freeway: Section 6, Indian Bend Wash, Loop 101, RAM-600-5-301D (Gannett Fleming of Arizona, Inc.), August 1990
- Final Report, Salt River Hydraulic Design, Grade Control No. 4 to McClintock Drive Bridge (CRSS), August 1991
- Floodplain Delineation for a 30-mile Reach of the Gila River, Arizona, Revised Final Report (Dames & Moore) 1988
- Gila Bend: Buckeye Highway (SR85) (Gila River Bridges), Hydraulic Report (Arizona Department of Transportation, Highways Division, Structures Section, Bridge Drainage Services) January 1991
- Gila River and Tributaries, Central Arizona Water Control Study, Hydrology Report (COE), May 1992
- Gila River & Tributaries, Salt-Gila, Arizona - Reconnaissance Report, Interim Report (COE), December 1989
- Gila River Flood Insurance Study, Contract FCD No. 88-52, Final Report, Consolidated Submittals and FEMA Correspondence
- Gila River Flood Insurance Study - Reconnaissance Field Trip, June 20, 1989
- Hayden Road Bridge over the Salt River, Preliminary Design Report (Boyle Engineering), May 1981
- Phoenix Flood Damage Survey: March 1978

Phoenix Flood Damage Survey: December 1978

Phoenix Flood Damage Survey: February 1980

Report for Geotechnical Engineering Services, Slope Stability Evaluation, Salt River Channelization, 40th Street to Mill Avenue, Tempe, Arizona (Thomas-Hartig & Associates, Inc.), August 10, 1992

Rio Salado Water Resources Master Plan - City of Tempe

Salt-Gila Interim Flood Control Works, Gillespie Dam to the Agua Fria River: Draft Final Report (Camp Dresser & McKee), June 12, 1981

Salt-Gila Interim Flood Control Works, Holly Acres Area - Draft Addendum and Appendix (Camp Dresser & McKee), June 12, 1981

Salt River Bank Stabilization at Tri-Cities Landfill - Design Report (Simons, Li & Assoc.), 1993

Salt River Bridge, Northern Alignment, East Papago Freeway: Segment 6 (T.Y. Lin International), November 1989

Salt River Channelization Floodplain Delineation Study, 48th Street to Southern Pacific Railroad Salt River Bridge (CRSS)

Salt River Channelization Floodplain Delineation Study, 48th Street to Southern Pacific Railroad Salt River Bridge, Additional Data (CRSS) September 1992

Salt River Channelization Floodplain Delineation Study, Southern Pacific Railroad Salt River Bridge to McClintock Drive Bridge (CRSS) November 1993

Salt River Flood Delineation Study: Country Club Drive to Granite Reef Dam with Proposed Gilbert Road Bridge (Burgess & Niple), 1988

Study for Flood Control: Alternatives to Cliff Dam (COE), October 1988

HEC-2 Models

Gillespie Dam to Bullard Avenue (Dames and Moore) 1988

Bullard Avenue to 115th Avenue (Corps of Engineers) 1985

115th Avenue to Country Club Drive (Corps of Engineers) 1982

Country Club Drive to Granite Reef Dam w/Gilbert Road Bridge (Burgess & Niple) 1988

Country Club Drive to Granite Reef Dam w/Gilbert Road as a dip crossing (as shown on FIRMs) (Burgess & Niple) 1988

Channelization of the Salt River, McClintock Drive to Dobson (Simons, Li & Assoc.) August 10, 1992

Salt River Channelization (Phase One) Western City Limits to the Southern Pacific Railroad Bridge (CRSS) September 1992

Salt River Channelization (Phase Two) Southern Pacific Railroad Bridge to McClintock Drive (CRSS) November 1993

Salt River Bank Stabilization at Tri-Cities Landfill (Simons, Li & Assoc.) 1993

As-Built Plans

Bridges:

- Gilbert Road
- Country Club Drive
- Alma School Road
- Hayden Road (McClintock Road)
- Scottsdale Road (Rural Road)
- Mill Avenue
- Southern Pacific Railroad
- Priest Drive
- Hohokam Expressway (SR 143)
- I-10 (Maricopa Freeway)
- 24th Street
- 16th Street
- 7th Street
- Central Avenue
- 7th Avenue
- 19th Avenue
- 35th Avenue
- 51st Avenue
- Bullard Avenue
- Estrella Parkway (Reems Road)
- Tuthill Road
- SR 85

Other:

- Holly Acres Bank Stabilization (FCD)
- East Papago Loop, RAM-600-5-511 (ADOT)
- Hohokam (University - Sky Harbor) RAM-600-3-511 (ADOT)

1993 As-Built Bridge Surveys

As-built bridge surveys were performed by Jaykim Engineers, Inc. and Greiner, Inc. for Michael Baker, Jr., Inc. under FCD contract #92-01.

- Gilbert Road
- Country Club Drive
- Alma School Road
- Hayden Road (McClintock Road)
- Scottsdale Road (Rural Road)
- Mill Avenue (old bridge)
- Southern Pacific Railroad
- Priest Drive
- Hohokam Expressway
- I-10 (Maricopa Freeway)
- 24th Street
- 16th Street
- 7th Street
- Central Avenue
- 7th Avenue
- 19th Avenue
- 35th Avenue
- 51st Avenue
- Bullard Avenue
- Estrella Parkway (Reems Road)
- Tuthill Road

Proposed Bridge Design Plans

- S.R. 85, Gila Bend - Buckeye Highway (under construction as of October 1993)
- S.R. 153, Sky Harbor Access (40th Street - currently under design)
- Red Mountain Freeway Bridge (under construction)
- Mill Avenue (construction completed 12/93)
- Pima Freeway Bridge (Price Road)

Design Plans

- Bank Stabilization, Perryville Area (Camp Dresser & McKee), revised July 1983
- Salt River Bank Stabilization at Tri-Cities Landfill: Design Plans (Simons, Li & Assoc.), 1993 (completed 1/94)

Preliminary Plans/Reports

- Tuthill Road Bridge Scour Protection Plans (MCDOT), 1993
- 91st Avenue Waste Water Treatment Plant: Preliminary Concept Report (alternatives to rectify flooding problems) (Simons, Li & Assoc.), 1993
- 19th Avenue Landfill, Bank Protection/Channelization: Preliminary Plans (Simons, Li & Assoc.), 1993
- Alma School Road - Scour Protection Plans (MCDOT), 1993

Other

- Aerial Photographs of the Salt-Gila from Granite Reef Dam to Gillespie Dam (McClain Harbers Co., Inc. for Michael Baker, Jr., Inc.), 1993
- Amended Environmental Impact Statement, Construction of Pilot Channel in the Salt and Gila Rivers, 91st Avenue to Gillespie Dam, Maricopa County, Arizona, December 1985
- Environmental Impact Statement, Clearing of Phreatophytic Vegetation from the Salt and Gila Rivers, 91st Avenue to Gillespie Dam, Maricopa County, Arizona, November 1981
- Proposed SR 153 Bridge: Scour Calculations
- Revised Report of the Environmental Database Search of Salt and Gila Rivers, Maricopa County, Arizona, Assignment FCD-050 (CEC/WRA, Inc.) January 31, 1994
- Salt River Bank Stabilization at Tri-Cities Landfill - HEC-6 (Simons, Li & Assoc.), 1993
- Technical Memorandum: Maricopa County Landfill; Old Tempe Landfill, Resources Reclamation Corporation of America (RRCA), First Street Landfill; and Bennett Family Trust Landfill Site Inspection South Indian Bend Wash Phase II, Stage 1 R1/FS (Arcswest), May 1991
- Topographic Mapping of the Salt-Gila from Granite Reef Dam to Gillespie Dam: 1 inch = 400 ft (McClain Harbers for Michael Baker, Jr., Inc.), February 1993.

Appendix B

Salt-Gila River Crossings

Salt-Gila River Crossings					
Crossing	Approx. miles from Granite Reef Dam	Type	Capacity, cfs	Current Q ₁₀₀ , cfs	Maintained by
Granite Reef Dam	0				
Gilbert Road	6	Bridge	*70,000	225,000	MCDOT
Country Club Road (SR 87)	11	Bridge	*180,000	225,000	ADOT
McKellips Road	11.5	Grade	<5,000	225,000	MCDOT
Alma School Road	12	Bridge	*190,000	220,000	MCDOT
Pima Freeway (Price Road) (Proposed)	14	Bridge	215,000	215,000	ADOT
Red Mountain Freeway (SR 202L) (Under Construction)	14.5	Bridge	215,000	215,000	ADOT
Hayden Road (McClintock Drive)	15	Bridge	250,000	215,000	Tempe
Scottsdale Road (Rural Road)	16	Bridge	250,000	215,000	Tempe
New Mill Avenue	17	Bridge	250,000	215,000	Tempe
Old Mill Avenue	17	Bridge	250,000	215,000	Tempe
Southern Pacific Railroad	17	Bridge	250,000	215,000	SPRR
Priest Drive	18	Bridge	289,000	215,000	Tempe
Hohokam Expressway (SR 143)	20	Bridge	289,000	210,000	ADOT
State Route 153 (Proposed)	21	Bridge	289,000	210,000	ADOT
Maricopa Freeway (I-10)	22	Bridge	215,000	210,000	ADOT
24th Street	23	Bridge	*180,000	205,000	Phoenix
16th Street	24	Bridge	*180,000	200,000	Phoenix
7th Street	25	Bridge	200,000	200,000	Phoenix
Central Avenue	25.5	Bridge	*180,000	200,000	Phoenix
7th Avenue	26	Bridge	200,000	195,000	Phoenix
19th Avenue	27	Bridge	*180,000	195,000	Phoenix
35th Avenue	29	Bridge	*105,000	195,000	Phoenix
51st Avenue	31	Bridge	200,000	190,000	MCDOT
67th Avenue	33	Grade	<5,000	190,000	MCDOT
91st Avenue	36	Grade	<5,000	185,000	MCDOT
Confluence with the Gila	38	N/A	N/A	N/A	N/A
115th Avenue	39	Grade	<5,000	250,000	MCDOT
El Mirage Road	40	Grade	<5,000	250,000	MCDOT

Salt-Gila River Crossings					
Crossing	Approx. miles from Granite Reef Dam	Type	Capacity, cfs	Current Q ₁₀₀ , cfs	Maintained by
Confluence with the Agua Fria River	42	N/A	N/A	N/A	N/A
Bullard Avenue	43	Bridge	*220,000	250,000	Goodyear
Estrella Parkway	44	Bridge	*220,000	250,000	Goodyear
Tuthill Road	50	Bridge	*200,000	250,000	MCDOT
Airport Road	51	Grade	Washed Out	250,000	MCDOT
State Route 85 (Existing 750 ft bridge)	59	Bridge	*70,000	245,000	ADOT
State Route 85 (under construction)	59	Bridge	245,000	245,000	ADOT
Gillespie Dam	72	N/A	N/A	235,000	Private
Old US 80	72.5	Bridge	*200,000	235,000	MCDOT

*Bridge capacity indicates flow (Q) at which approach road is closed by MCDOT. In some instances, approach roads may be flooded. In others, evaluation of the bridge and local flooding situation may be required at the indicated Q as HEC-2 modeling indicates that bridge is capable of passing the 100-year Q.

Appendix C

Utilities

**UTILITIES CROSSING THE SALT/GILA RIVER
GRANITE REEF DAM TO GILLESPIE DAM
SORTED FROM EAST TO WEST**

DATE 12/20/93

T	R	SECTION	OWNER	TYPE	SIZE	LOCATION	DESCRIPTION	XING	N/S	PLANS	SHEET	ELEVATION	CHANNEL INVERT		
3	N	7	E	6,7,18,19,30	PHOENIX	WATER	36"-60"	WEST BANK/VERDE RIVER	INFILTRATION GALLERIES	NO	W				
2	N	7	E	6	PHOENIX	WTP		CONFLUENCE/ VERDE&SALT	WATER FILTER PLANT	NO	W				
2	N	6	E	13,23,24	AT&T	TELE		SOUTHERN CANAL HEADWORKS	PARALLELS S/BANK ALONG CANAL	NO	S				
2	N	6	E	13	CAP	CANAL		GRANITE REEF DAM	SIPHON UNDER SALT RIVER	YES					
2	N	6	E	13-15,19-22	PHOENIX	WATER	36"-60"	VERDE R-EVERGREEN WASTEWAY	PARALLELS NORTH BANK	NO	N				
2	N	6	E	13,14	SRP	CANAL		U/S GRANITE REEF DAM	AZ CANAL HEADWORKS	NO	N				
2	N	6	E	13,23,24	SRP	CANAL		U/S GRANITE REEF DAM	SOUTHERN CANAL HEADWORKS	NO	S				
2	N	6	E	13	SRP	POWER,OH	12KV	GRANITE REEF DAM		YES					
2	N	5	E	25	DOE	POWER, OH	2-230KV	GILBERT ROAD	CROSSES RIVER	YES					
2	N	5	E	25-26,34-35	APS	POWER, OH	230KV	W/GILBERT RD - W/MCCLINTOCK	PARALLELS NORTH BANK	NO	N				
2	N	5	E	25-26,34-35	SRP	POWER, OH	230KV	W/GILBERT RD - W/MCCLINTOCK	PARALLELS NORTH BANK	NO	N				
1	N	5	E	4	MESA	GAS	4"	COUNTRY CLUB DRIVE		YES					
1	N	5	E	4	SRP	POWER, OH	12KV	ALMA SCHOOL ROAD		YES					
1	N	4	E	13	MESA	SEWER	18" & 21"	E/ MCCLINTOCK DRIVE	SEWER SIPHON	YES	SRC	562/585	IE = 1126	1152	
1	N	4	E	13	TEMPE	WATER	48"	E/ MCCLINTOCK DRIVE		YES	SRC	520/585	1126	1152	
1	N	4	E	13	SWG	GAS	10"&12"	MCCLINTOCK DRIVE		YES	SRC	234/304	1126	1152	
1	N	4	E	11	SRP	SUBSTATION		W/MCCLINTOCK, S/CURRY	BRANDOW SUBSTATION	NO	N				
1	N	4	E	14	APS	POWER,OH	69KV	W/MCCLINTOCK DR		YES	SRC				
1	N	4	E	14	APS	POWER PLANT		W/MCCLINTOCK, S/RIVER	OCOTILLO POWER PLANT	NO	S				
1	N	4	E	14	PHOENIX	SEWER	39"	W/MCCLINTOCK	TO NORTH BANK SEWER	NO	N				
1	N	4	E	14	TEMPE	WATER	36"	W/MCCLINTOCK DR		YES	SRC	243/304	IE = 1136	1152	
1	N	4	E	14	SRP	POWER,OH	69&230K	W/MCCLINTOCK		YES					
1	N	4	E	14	SRP	POWER,OH	69&230K	W/MCCLINTOCK-MILL		NO					
1	N	4	E	14-18	APS	POWER,OH	TRANS	MCCLINTOCK -40TH ST	PARALLELS SOUTH BANK	NO	S				
1	N	4	E	15	PHOENIX	SEWER	54"-72"	MCCLINTOCK - HOHOKAM FRWY	PARALLELS NORTH BANK	NO	N	SRC	257/369	1126	
1	N	4	E	15	PHOENIX	WATER	72"	MCCLINTOCK TO 48TH STREET	PARALLELS SOUTH BANK	NO	S	SRC	558/585		
1	N	4	E	14	TEMPE	WATER	30"	90° E/RURAL RD BRIDGE		YES	SRC	567/585	1126	1144	
1	N	4	E	15	USWEST	TELE,UG		RURAL ROAD		YES					
1	N	4	E	15	TEMPE	SEWER	21" & 18"	91° W/RURAL RD BRIDGE	SIPHON	YES	SRC	565/585	1126	1144	
1	N	4	E	15	AP&C	NITROGEN GAS	6"	MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES	SRC	558/585	1170= TOP/ARCH		
1	N	4	E	15	TEMPE	WATER	12"	MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES	SRC	558/585	1170= TOP/ARCH		
1	N	4	E	15	SRP	POWER,OH	230KV	MILL AVENUE		YES					
1	N	4	E	15	SWG	GAS	8"	MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES	SRC	558/585	1170= TOP/ARCH		
1	N	4	E	15	USWEST	TELE	8 DUCT	MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES	SRC	558/585	1170= TOP/ARCH		
1	N	4	E	15	APS	POWER,UG	6 DUCT	2ND MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES		121/161			
1	N	4	E	15	TEMPE	WATER, RECLAME	12"	2ND MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES		31/161			
1	N	4	E	15	USWEST	TELE	6 DUCT	2ND MILL AVE BRIDGE	ATTACHED TO BRIDGE	YES		130/161			
1	N	4	E	16	MCI	COMMUNICATION	2-F/O	SPRR BRIDGE	ATTACHED TO BRIDGE	YES	SRC	557/585	1160=LOW CHORD		
1	N	4	E	16	SPTC	COMMUNICATION	4WIRE	SPRR BRIDGE	ATTACHED TO BRIDGE	YES	SRC	557/585	1160=LOW CHORD		
1	N	4	E	16	APS	POWER, OH	12KV	W/SPRR BRIDGE		YES	SRC	557/585			

**UTILITIES CROSSING THE SALT/GILA RIVER
GRANITE REEF DAM TO GILLESPIE DAM
SORTED FROM EAST TO WEST**

DATE 12/20/93

1	N	4	E	16	SWG	GAS	6"	HARDY DRIVE	TO BE RELOCATED BY OTHERS	YES			274/369		
1	N	4	E	16	APS	POWER.OH	69KV	E/PRIEST DRIVE		YES			270/369		
1	N	4	E	16	SRP	POWER. OH	69KV	E/PRIEST		YES					
1	N	4	E	16	TEMPE	SEWER	48"	PRIEST DRIVE		YES			268/369	IE = 1112	1124
1	N	4	E	16	SRP	CANAL		PRIEST DRIVE	GRAND CANAL HEADWORKS	NO	N				
1	N	4	E	16		WATER	36"	PRIEST DRIVE		YES			268/369	IE = 1108	1124
1	N	4	E	17	SRP	SUBSTATION		W/PRIEST, N/1ST ST	IRVIN SUBSTATION	NO	S				
1	N	4	E	17	AT&T	TELE		48TH ST	CROSSES UNDER RIVER	YES				APPROX 27' DEE	1114
1	N	4	E	17	USWEST	TELE	20 DUCT	48TH STREET		YES					
1	N	4	E	18	PHOENIX	SEWER	48"&18"	E/ HOHOKAM EXPWY		YES	SRC	218/369	IE = 1096		1114
1	N	4	E	18	PHOENIX	WATER	60"	W/HOHOKAM EXPWY		YES	SRC	218/369	IE = 1085		1114
1	N	4	E	18	SWG	GAS	12"	E/ HOHOKAM EXPWY		YES			276/369		
1	N	4	E	18	USWEST/AT&	TELE	20 DUCT	E/ HOHOKAM EXPWY		YES			276/369		
1	N	3	E	13	APS	POWER.OH	TRANS	W/40TH STREET		YES					
1	N	3	E	13,14,21-29	APS	POWER.OH	TRANS	40TH ST - CENTRAL AVENUE	PARALLELS NORTH BANK	NO	N				
1	N	3	E	22,23	SWG	GAS	2"	28TH - 20TH STREETS	ALONG MAGNOLIA STREET	NO	N				
1	N	3	E	21-22	PHOENIX	WATER	2-36"	16TH STREET	CROSSES UNDER RIVER	YES					
1	N	3	E	22	SRP	POWER.UG	12KV	16TH STREET	ATTACHED TO BRIDGE	YES					
1	N	3	E	21	SWG	GAS	10"	7TH ST BRIDGE		YES					1048
1	N	3	E	21	US SPRINT	TELE		7TH ST BRIDGE	ATTACHED TO BRIDGE	YES					
1	N	3	E	20	USWEST	TELE		CENTRAL AVENUE		YES					
1	N	3	E	20	SWG	GAS	?	CENTRAL AVE		YES					1046
1	N	3	E	19	SWG	GAS	?	15TH - 19TH AVE	ALONG LOWER BUCKEYE RD	NO	N				
1	N	3	E	19	SRP	POWER, OH	12KV	19TH AVENUE		YES					
1	N	3	E	19	USWEST	TELE		19TH AVENUE		YES					
1	N	2	E	24	PHOENIX	WATER	20" & 8"	19TH AVE BRIDGE	ATTACHED TO BRIDGE	YES					
1	N	2	E	24	SWG	GAS	2"	19TH -27TH AVE	ALONG BROADWAY ROAD	NO	S				
1	N	2	E	24	PHOENIX	WWTP		23RD AVENUE	NORTH BANK OF RIVER	NO	N				
1	N	2	E	23	PHOENIX	WATER	48"	35TH AVENUE	CROSSES UNDER RIVER	YES					
1	N	2	E	22	SRP	POWER, OH	12KV	43RD AVENUE		YES					
1	N	2	E	21	SRP	POWER, OH	69KV	W/43RD AVENUE	CROSSING	YES					
1	N	2	E	21	DOE	POWER, OH	2-230KV	47TH AVENUE	CROSSING	YES					
1	N	2	E	21	EPNG	GAS	16"	47TH AVENUE	RIVER CROSSING	YES					
1	N	2	E	21	SPPL	PETROLEUM	6"	227' E/51ST AVENUE	CROSSES UNDER RIVER	YES					
1	N	2	E	21	SPPL	PETROLEUM	8"	223' E/51ST AVENUE	CROSSES UNDER RIVER	YES					
1	N	2	E	21	PHOENIX	SEWER	72"	51ST AVENUE CROSSING	RIVER CROSSING	YES					
1	N	2	E	20	SRP	POWER, OH	12KV	51ST AVENUE		YES					
1	N	2	E	29	SRP	POWER, OH	69&230K	59TH AVENUE	CROSSING	YES					
1	N	2	E	30	SRP	POWER, OH	12KV	67TH AVENUE		YES					
1	N	1	E	26	SRP	POWER, OH	69&500K	W/ 75TH AVE (SOUTHERN AVE)	CROSSING	YES					
1	N	1	E	34	SRP	POWER, OH	12KV	91ST AVENUE		YES					

Exposed during Flood of 2/95. Temp re-routed onto bridge. To be reconstructed by directional bore.

**UTILITIES CROSSING THE SALT/GILA RIVER
GRANITE REEF DAM TO GILLESPIE DAM
SORTED FROM EAST TO WEST**

DATE 12/20/93

ABBREVIATIONS:												
AP&C = AIR PRODUCTS & CHEMICALS (NITROGEN GAS AIR PRODUCTS)												
APS = ARIZONA PUBLIC SERVICE COMPANY												
BIC = BUCKEYE IRRIGATION CANAL												
CAP = CENTRAL ARIZONA PROJECT												
DOE = DEPARTMENT OF ENERGY												
D/S = DOWNSTREAM												
EPNG = EL PASO NATURAL GAS												
F/O = FIBER OPTIC												
IBW = INDIAN BEND WASH												
IE = INVERT ELEVATION												
KV = KILOVOLT												
OH = OVERHEAD												
PIR = PHOENIX INTERNATIONAL RACEWAY												
SPPL = SOUTHERN PACIFIC PIPELINE (PETROLEUM PIPELINE)												
SPRR = SOUTHERN PACIFIC RAILROAD												
SPTC = SOUTHERN PACIFIC TRANSPORTAION COMPANY												
SR85 = STATE ROUTE 85												
SRC = SALT RIVER CHANNEL												
SRP = SALT RIVER PROJECT												
SWG = SOUTHWEST GAS CORPORATION												
TELE = TELEPHONE												
TEP = TUCSON ELECTRIC POWER COMPANY												
TRANS = TRANSMISSION												
U/S = UPSTREAM												
UG = UNDERGROUND												
USBR = US BUREAU OF RECLAMATION												
W/MCCLINTOCK = WEST OF MCCLINTOCK, OTHERS SIMILAR												
WTP = WATER TREATMENT PLANT												
WWTP = WASTEWATER TREATMENT PLANT												

*1/93 Flood 137,000 CFS Peak
2/95 Flood 88,000 CFS Peak ≈ 10 yr Event*

Appendix D

Land Use Map

A land use map, 1 inch = 1000 feet, is provided under separate cover.

Land use data from Granite Reef Dam, in T2N R6E, west to the Baseline Road alignment T1N/T1S in R2W reflects the database file obtained from the Salt River Project (SRP) dated 1989. Land use data for the area T1S R2W to Gillespie Dam, in T2S R5W, is from United States Geological Survey (USGS) land use maps of unknown date. Aerial photographic background is from Landiscor and dated January 1993.

Land use data shown is intended for broad representational purposes only. Exceptions to the identified land use may exist within each and every land use type. Identified floodplain limits reflect the most current revision (December 1993) of the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA). Some bridges and channelization may not be reflected in the FEMA floodplain delineation, particularly in the area from 40th Street to McClintock Drive.

Land use data has not been fully rectified with the aerial photographic background. For this reason, obvious discrepancies exist between the database land use and the photographed land use. This explains why the river land use designation occasionally crosses the line delineating the 100-year floodplain.

Appendix E

Topographic Mapping

Topographic mapping, 1 inch = 400 feet, 4-foot contour interval, is provided under separate cover. The mapping was prepared by McClain Harbers Co., Inc. for Micahel Baker, Jr., Inc., under FCD contract #92-01. Flight dates were December 13, 1991, January 13, 1992, and January 23, 1992.

Portions of the channel area were re flown on February 7, 1993 and the mapping was revised to reflect the change in topography resulting from the January 1993 flooding of the Salt and Gila Rivers. The mapping has not been field-verified so all sheets are labeled "Preliminary." Additional copies are available through the District.

Appendix F

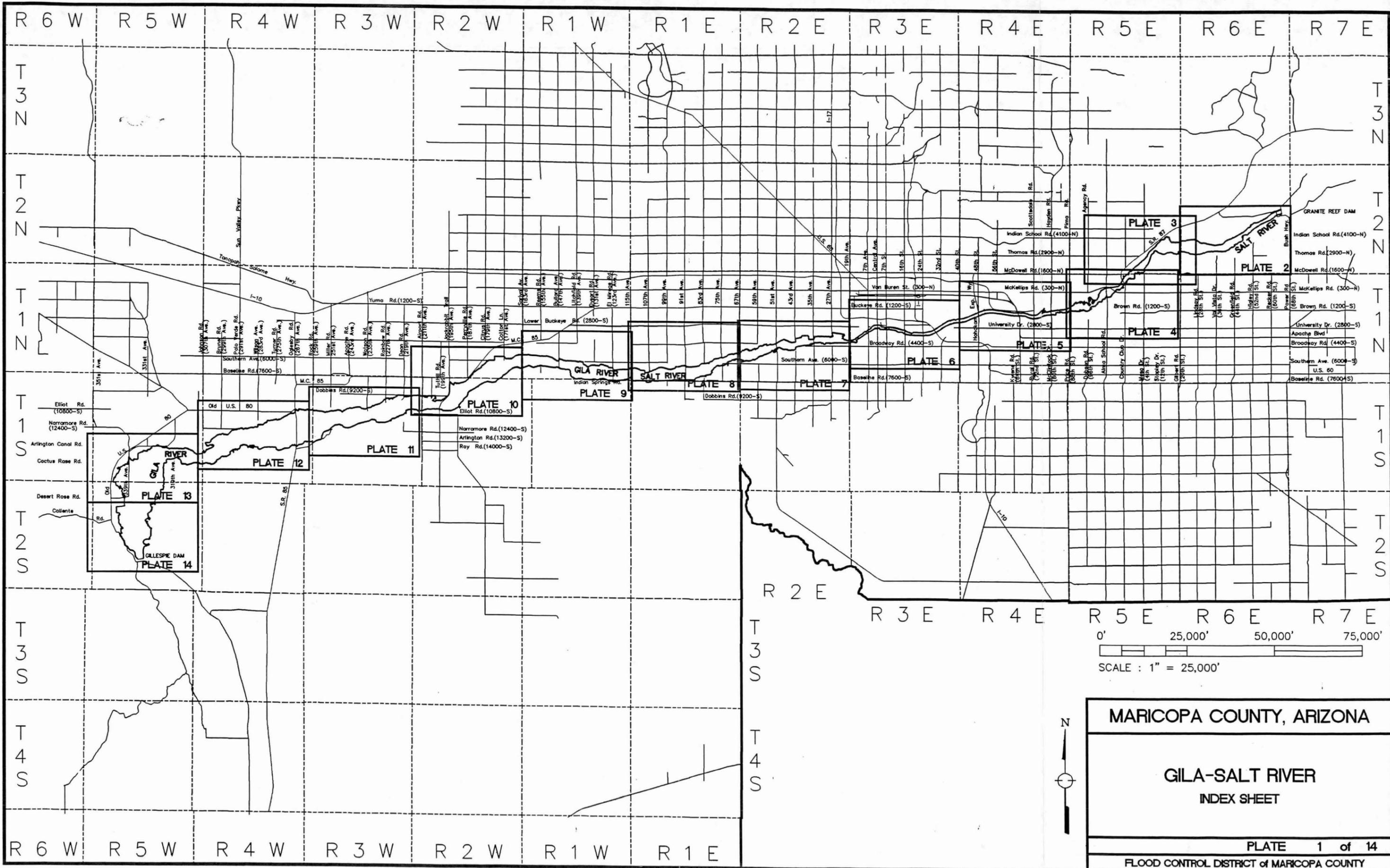
Firm Panels

Numerical Listing	
Panel Number	Effective Date
04013C1720E	September 4, 1991
04013C1750E	September 4, 1991
04013C2050E	September 4, 1991
04013C2065E	September 4, 1991
04013C2070E	September 4, 1991
04013C2090E	September 4, 1991
04013C2095D	April 15, 1988
04013C2115E	September 4, 1991
04013C2120E	September 4, 1991
04013C2140E	September 4, 1991
04013C2145E	December 3, 1993
04013C2155D	April 15, 1988
04013C2160D	April 15, 1988
04013C2165E	December 3, 1993
04013C2170E	September 4, 1991
04013C2180E	September 4, 1991
04013C2185E	September 4, 1991
04013C2190E	December 3, 1993
04013C2205E	September 4, 1991
04013C2460E	September 4, 1991
04013C2470E	September 4, 1991
04013C2480E	September 4, 1991
04013C2485E	September 4, 1991
04013C2490E	September 4, 1991
04013C2495E	September 4, 1991
04013C2505E	September 4, 1991
04013C2510E	September 4, 1991
04013C2530E	September 4, 1991
04013C2550E	September 4, 1991
04013C2555D	April 15, 1988
04013C2835F	December 3, 1993

Firm Panels

Listing by Reach: Granite Reef Dam to Gillespie Dam	
Reach Description	Panel Number
Granite Reef Dam to approx. the Indian School Road alignment	04013C1750E
Approx. Indian School Road alignment to approx. Val Vista Drive Road alignment	04013C2205E
Approx. Val Vista Drive alignment to approx. Horne Road alignment	04013C2185E 04013C1720E
Approx. Horne Road alignment to approx. Dobson Road alignment	04013C2180E 04013C2190E
Approx. Dobson Road alignment to approx. Rural Road (Scottsdale Road)	04013C2160D 04013C2170E
Approx. Mill Avenue to approx. 38th Street alignment	04013C2165E 04013C2155D
Approx. 38th Street alignment to approx. 8th Street alignment	04013C2145E
Approx. 8th Street alignment to approx. 31st Avenue alignment	04013C2140E
Approx. 31st Avenue alignment to approx. 59th Avenue alignment	04013C2120E
Approx. 59th Avenue alignment approx. 91st Avenue alignment	04013C2115E
Approx. 91st Avenue alignment to approx. 119th Avenue alignment	04013C2095D
Approx. 119th Avenue alignment to approx. Bullard Avenue	04013C2090E 04013C2555D
Approx. Bullard Avenue to approx. 0.5 mi west of Cotton Lane (approx. 176th Avenue alignment)	04013C2070E 04013C2550E
Approx. 0.5 mi west of Cotton Lane (approx. 176th Avenue alignment) to approx. Airport Road	04013C2065E 04013C2530E
Approx. Airport Road to approx. 0.5 mi west of Watson Road alignment	04013C2510E 04013C2050E
Approx. 0.5 mi west of Watson Road alignment to approx. S.R. 85 (Oglesby Road)	04013C2505E
Approx. S.R. 85 (Oglesby Road) to approx. 0.6 mi west of Palo Verde Road alignment	04013C2485E 04013C2495E
Approx. 0.6 mi west of Palo Verde Road alignment to approx. 0.25 mi west of 323rd Avenue alignment (downstream of the confluence with the Hassayampa River)	04013C2480E 04013C2490E
Approx. 0.25 mi west of 323rd Avenue alignment to approx. 2 mi south of Desert Rose Road alignment	04013C2490E 04013C2460E 04013C2470E
Approx. 2 mi south of Desert Rose Road alignment to Gillespie Dam and Old U.S. Highway 80	04013C2835F

Appendix G
Aerial Photographs



MARICOPA COUNTY, ARIZONA

GILA-SALT RIVER
INDEX SHEET

PLATE 1 of 14

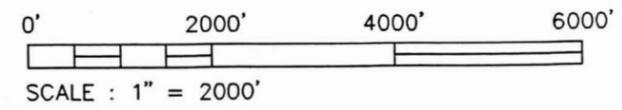
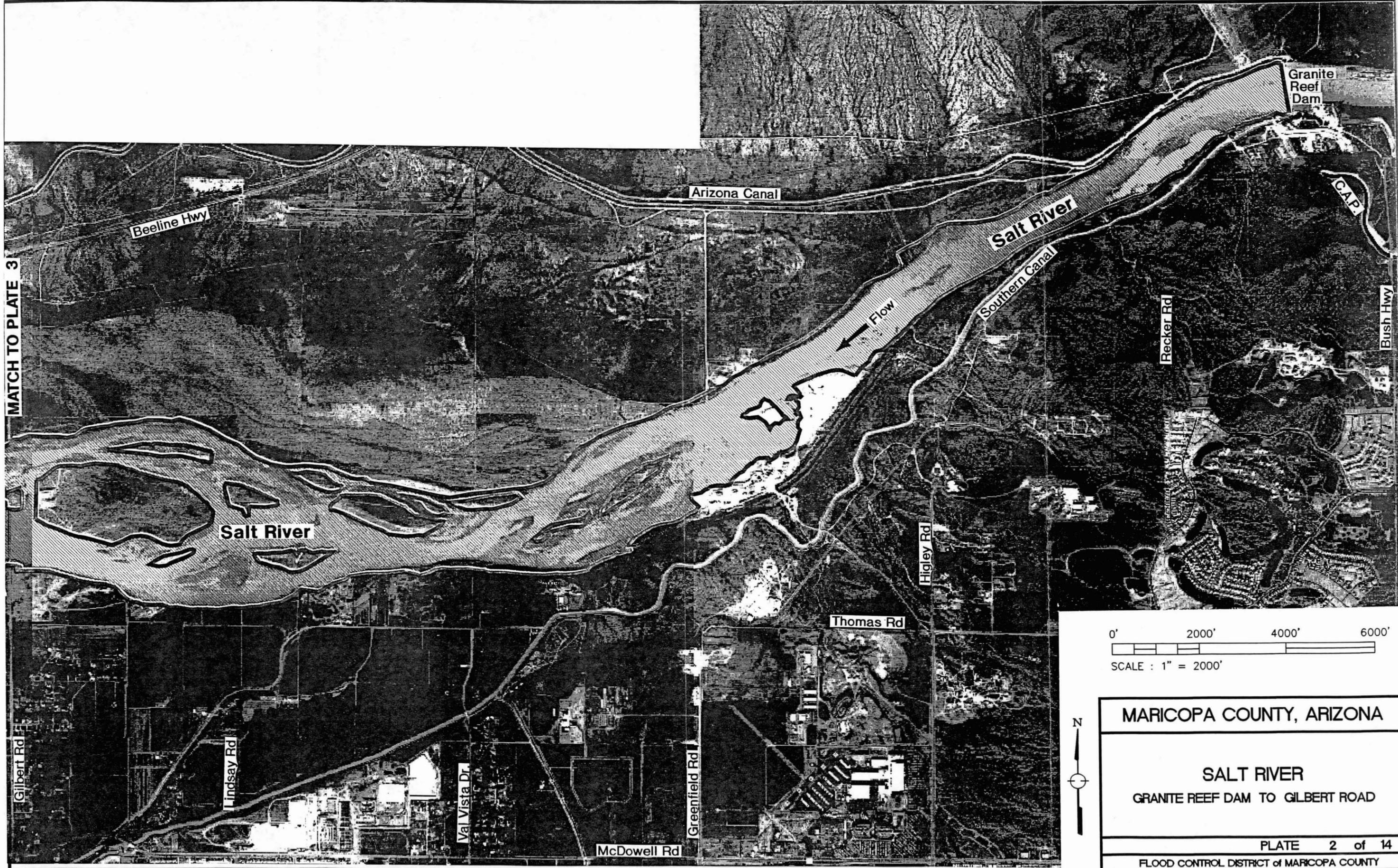
FLOOD CONTROL DISTRICT of MARICOPA COUNTY



0' 25,000' 50,000' 75,000'

SCALE : 1" = 25,000'

MATCH TO PLATE 3



MARICOPA COUNTY, ARIZONA

SALT RIVER
GRANITE REEF DAM TO GILBERT ROAD

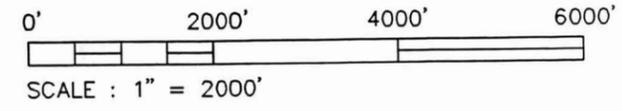
PLATE 2 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MATCH TO PLATE 2

MATCH TO PLATE 4



MARICOPA COUNTY, ARIZONA

SALT RIVER

GILBERT ROAD TO MCDOWELL ROAD

PLATE 3 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MATCH TO PLATE 3

McDowell Rd

McKellips Rd

Salt River

Crosscut Canal

Tempe Canal

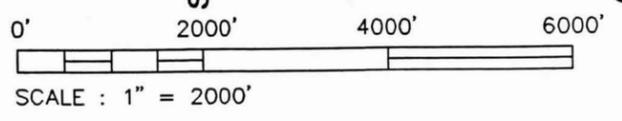
Consolidated Canal

Brown Rd

Consolidated Canal

University Rd

MATCH TO PLATE 5



MARICOPA COUNTY, ARIZONA

SALT RIVER
MCDOWELL ROAD TO PIMA ROAD

PLATE 4 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

Price Rd

Dobson Rd

Alma School Rd

S.R. 87-93
Country Club Dr.

Mesa Dr.

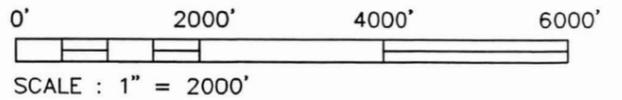
Stapley Dr

Gilbert Rd



MATCH TO PLATE 6

MATCH TO PLATE 4

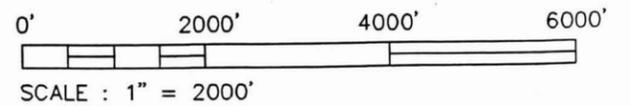
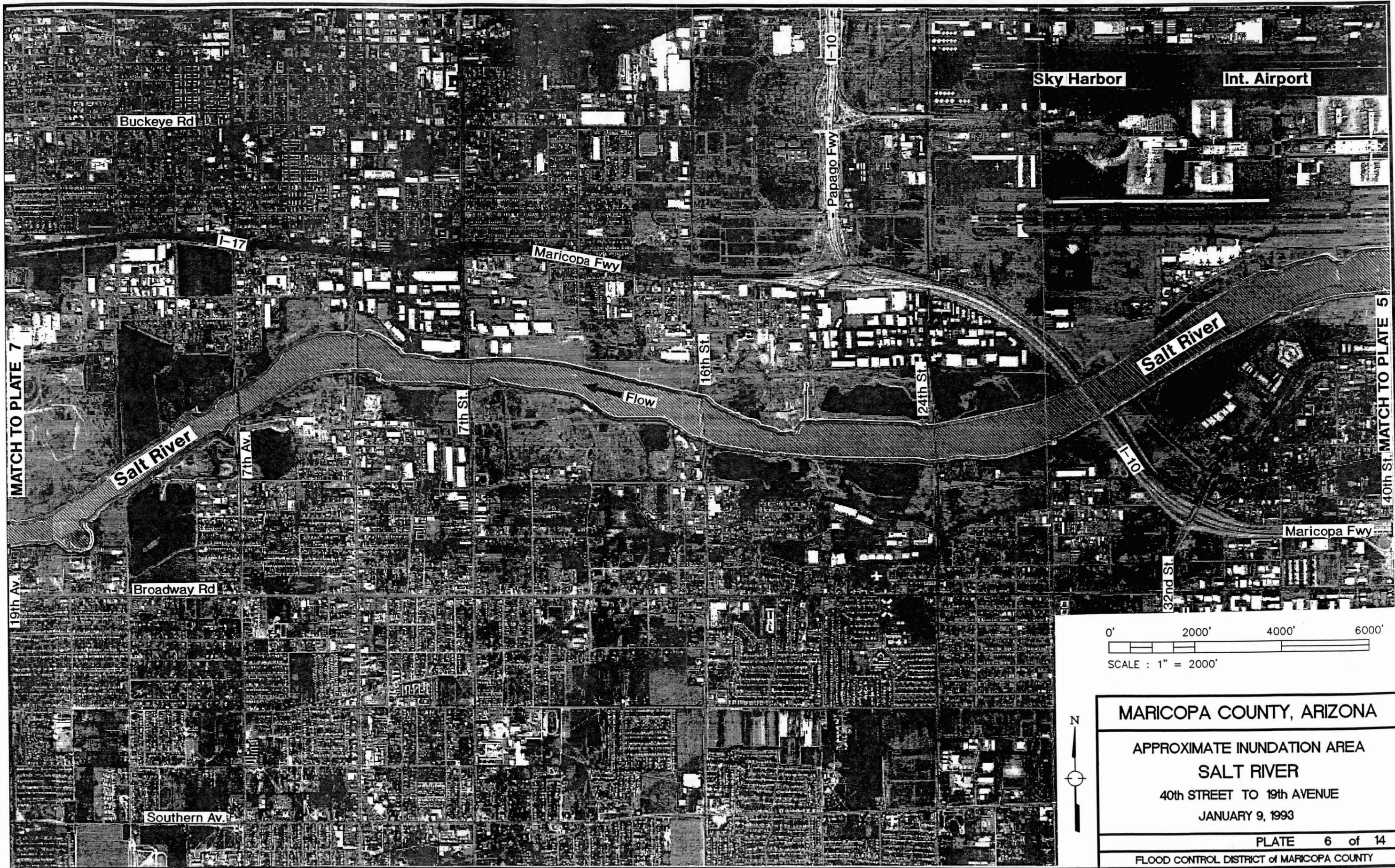


MARICOPA COUNTY, ARIZONA

SALT RIVER
PIMA ROAD TO 40th STREET

PLATE 5 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MARICOPA COUNTY, ARIZONA

APPROXIMATE INUNDATION AREA

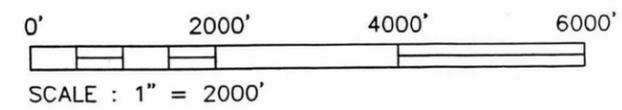
SALT RIVER

40th STREET TO 19th AVENUE

JANUARY 9, 1993

PLATE 6 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

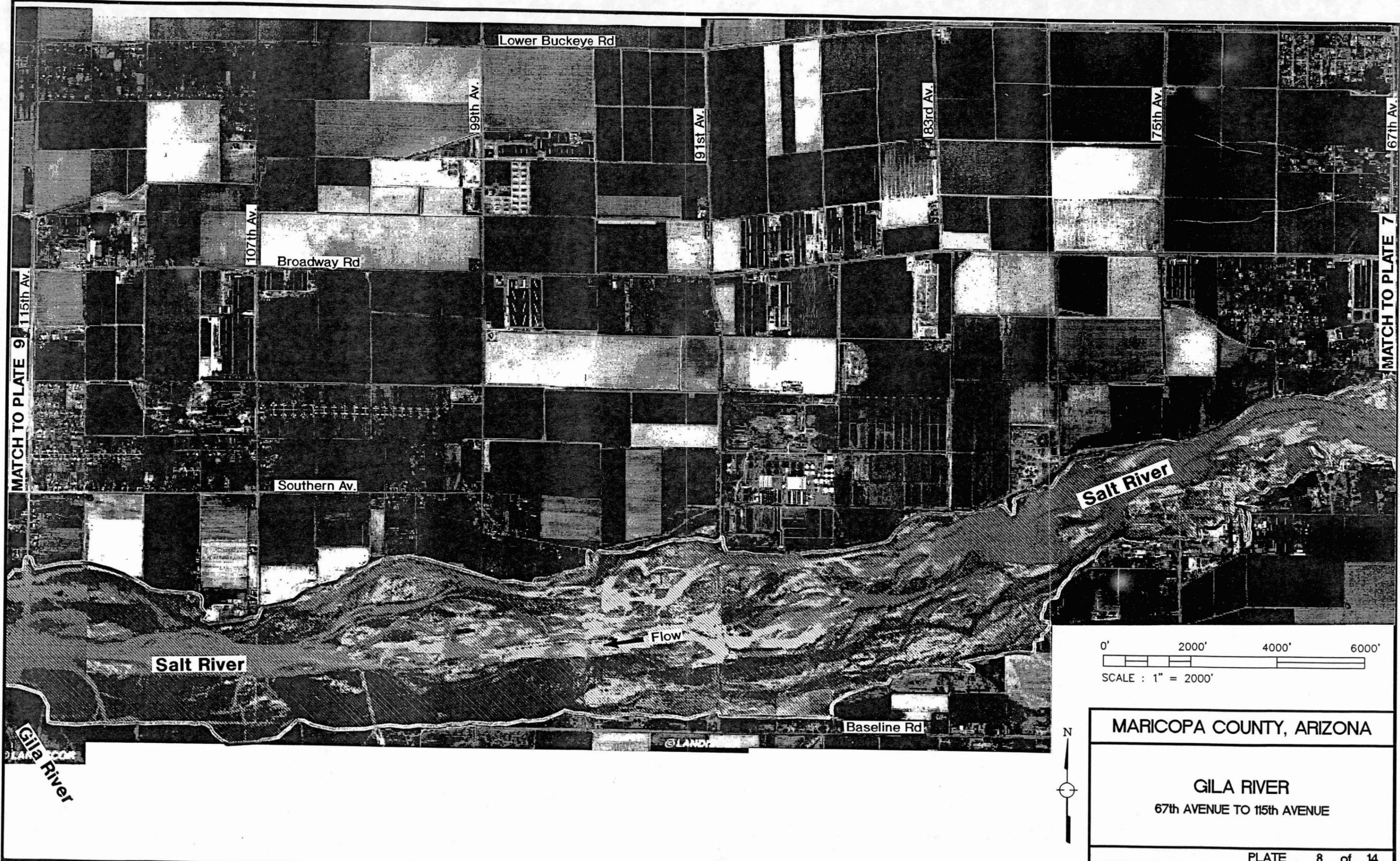


MARICOPA COUNTY, ARIZONA

SALT RIVER
19th AVENUE TO 67th AVENUE

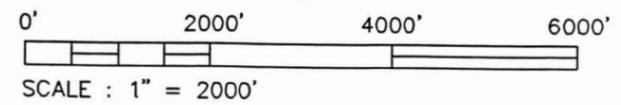
PLATE 7 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MATCH TO PLATE 9

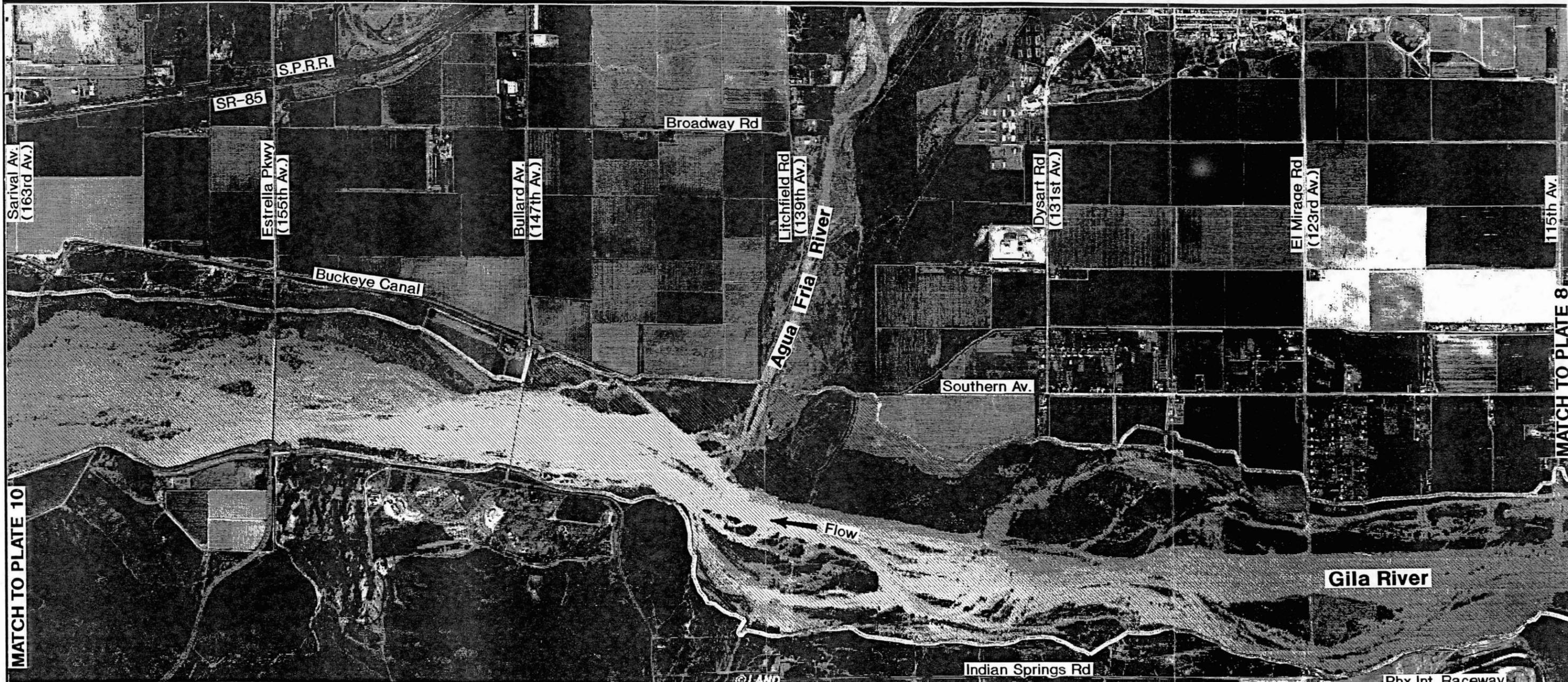
MATCH TO PLATE 7



MARICOPA COUNTY, ARIZONA

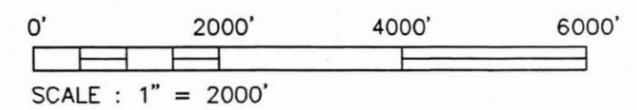
GILA RIVER
67th AVENUE TO 115th AVENUE

PLATE 8 of 14
FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MATCH TO PLATE 10

MATCH TO PLATE 8



MARICOPA COUNTY, ARIZONA

APPROXIMATE INUNDATION AREA

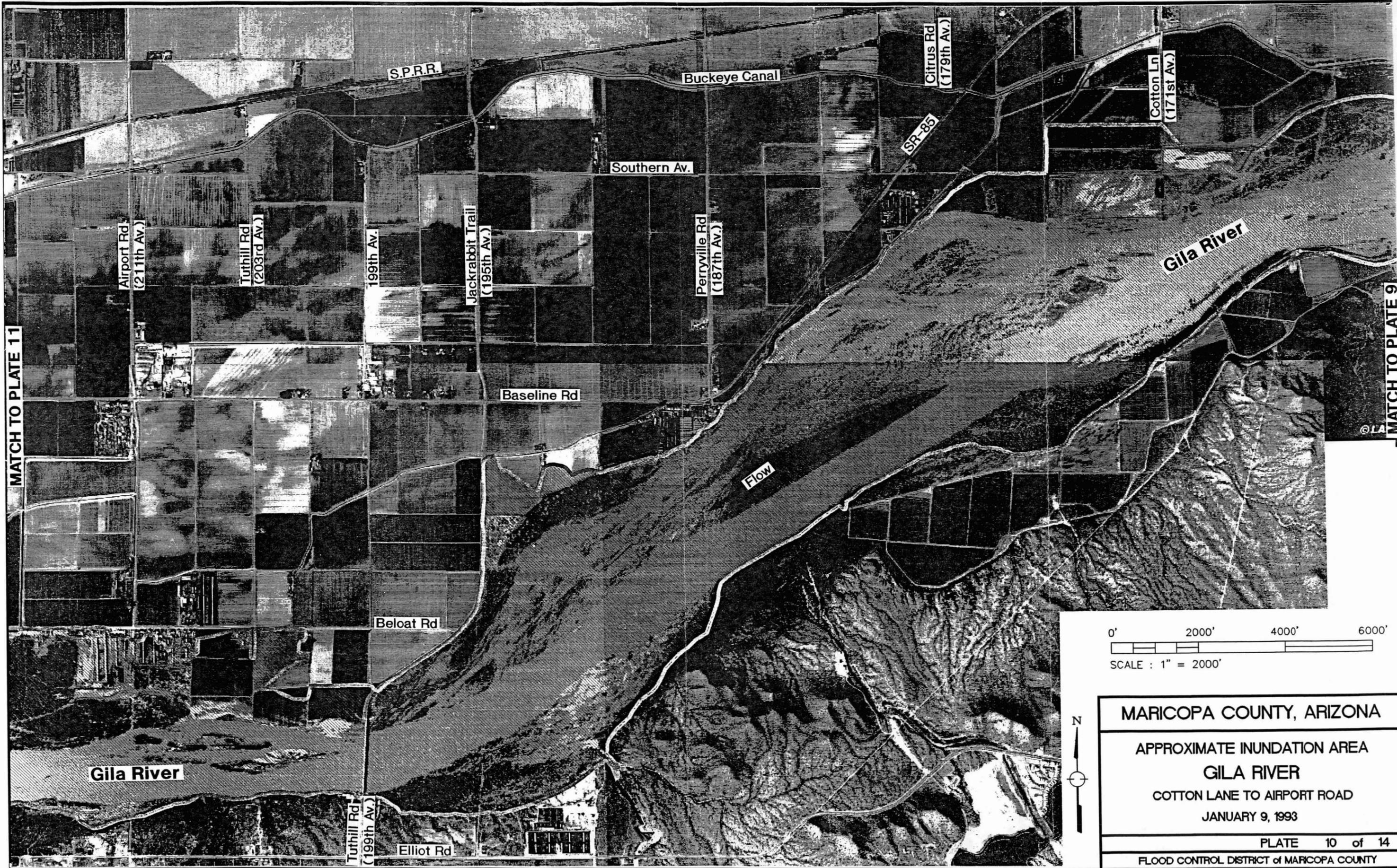
GILA RIVER

115th AVENUE TO SARIVAL AVENUE

JANUARY 9, 1993

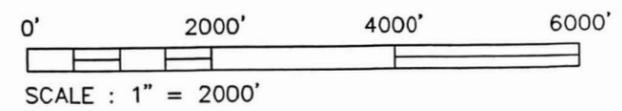
PLATE 9 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



MATCH TO PLATE 11

MATCH TO PLATE 9



MARICOPA COUNTY, ARIZONA

APPROXIMATE INUNDATION AREA
GILA RIVER
 COTTON LANE TO AIRPORT ROAD
 JANUARY 9, 1993

PLATE 10 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

MATCH TO PLATE 12

Gila River

Rooks Rd
(259th Av.)

S.R. 85

Miller Rd
(251st Av.)

Apache Rd
(243rd Av.)

Beloit Rd

Watson Rd
(235th Av.)

Rainbow Rd
(227th Av.)

Dean Rd
(219th Av.)

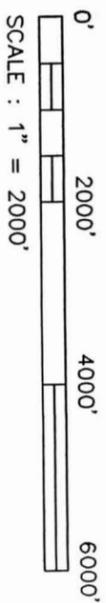
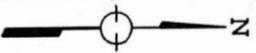
Flow

Gila River

Eagle Mtn Rd

Waterman Wash

MATCH TO PLATE 10



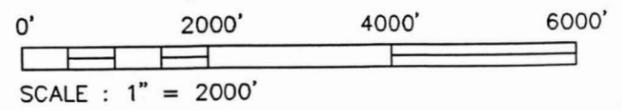
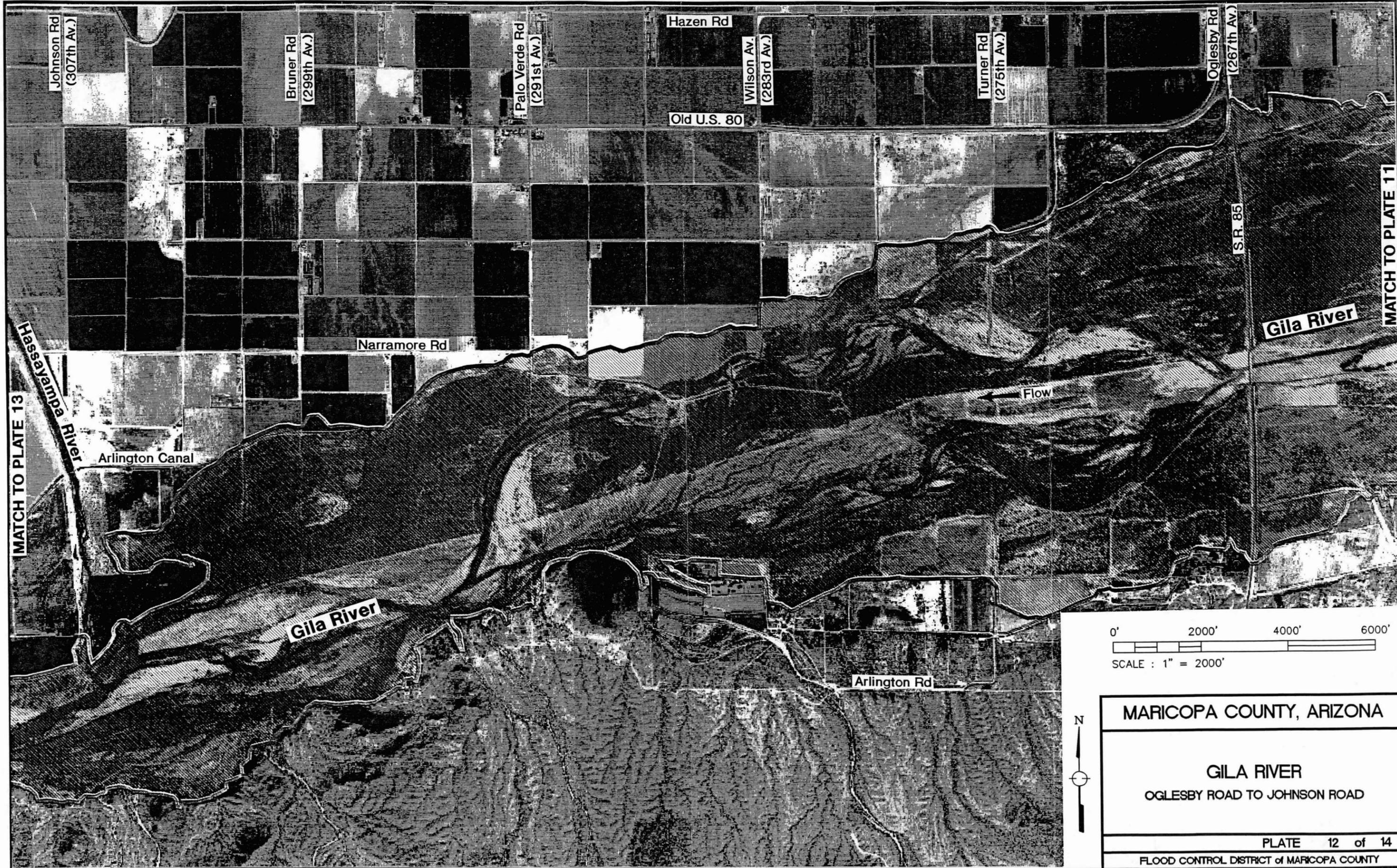
MARICOPA COUNTY, ARIZONA

GILA RIVER

DEAN ROAD TO ROOKS ROAD

PLATE 11 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

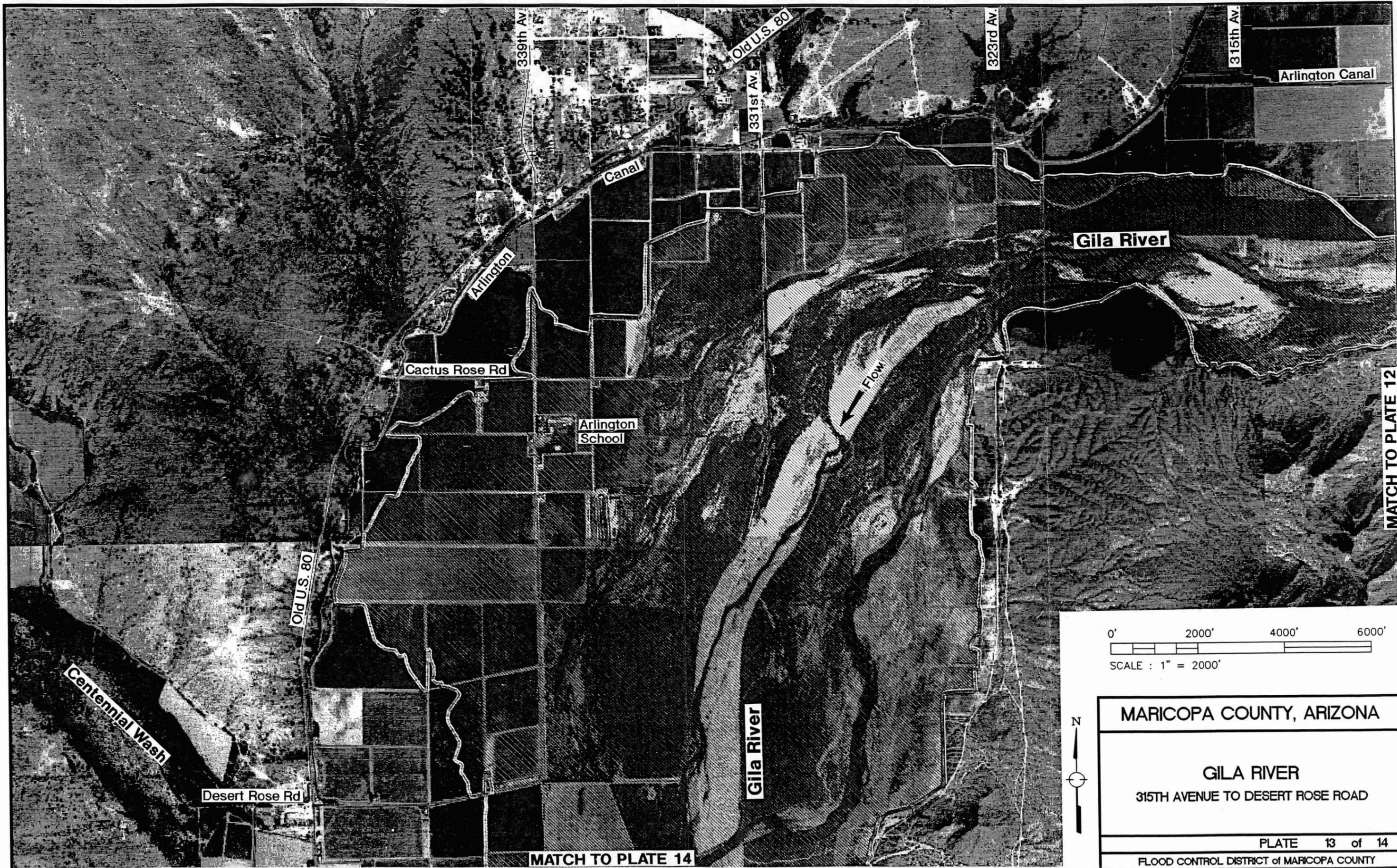


MARICOPA COUNTY, ARIZONA

GILA RIVER
OGLESBY ROAD TO JOHNSON ROAD

PLATE 12 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY



0' 2000' 4000' 6000'
SCALE : 1" = 2000'



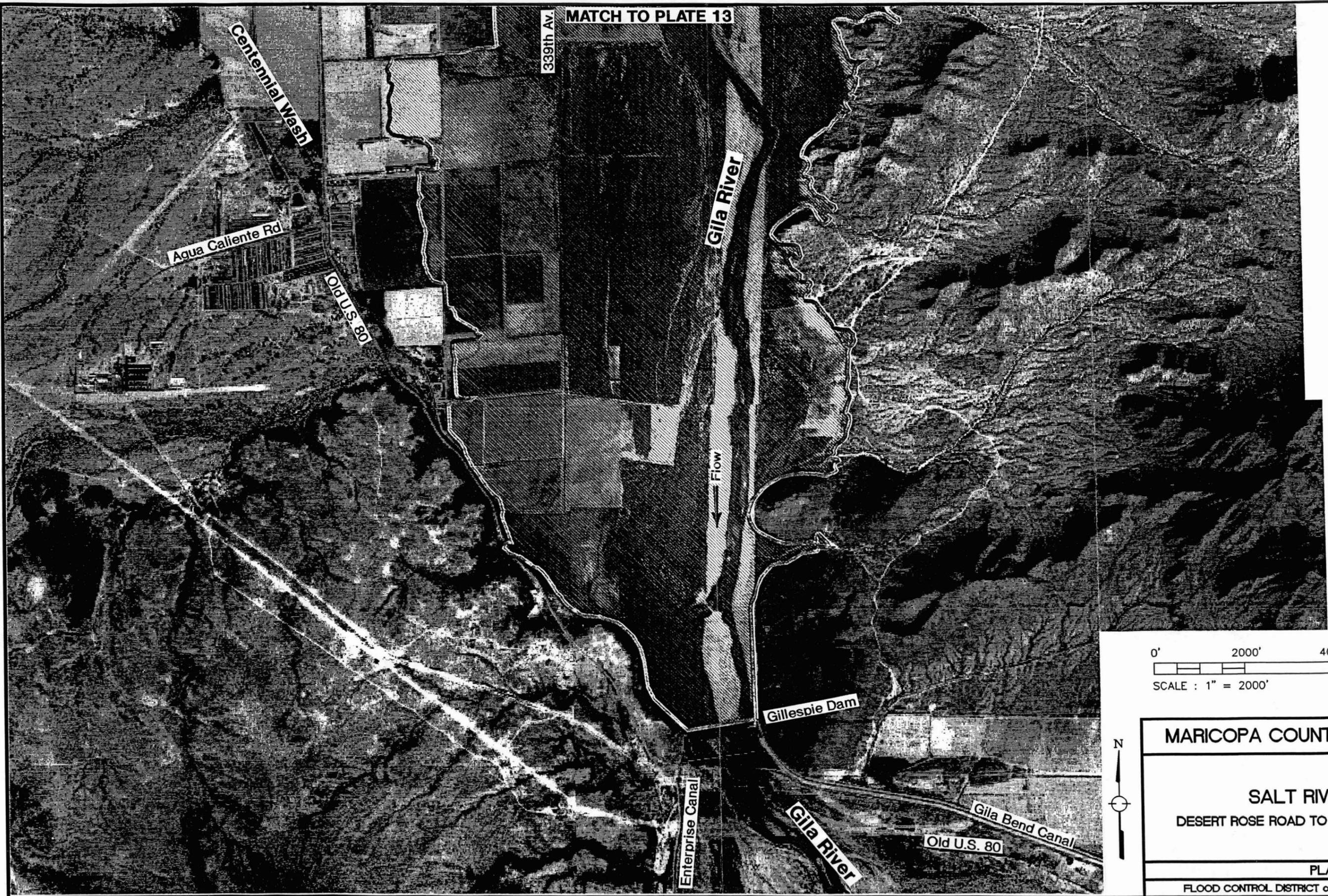
MARICOPA COUNTY, ARIZONA

GILA RIVER
315TH AVENUE TO DESERT ROSE ROAD

PLATE 13 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

MATCH TO PLATE 13



Centennial Wash

Agua Caliente Rd

Old U.S. 80

339th Av.

Gila River

Flow

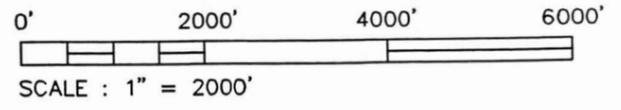
Gillespie Dam

Enterprise Canal

Gila River

Gila Bend Canal

Old U.S. 80



MARICOPA COUNTY, ARIZONA

SALT RIVER
DESERT ROSE ROAD TO GILLESPIE DAM

PLATE 14 of 14

FLOOD CONTROL DISTRICT of MARICOPA COUNTY