

Historic Information-

**Robert Edwin Cron, First Chief Engineer and General Manager
of the Flood Control District of Maricopa County, 1960 – 1961**

Background Information on Robert E. Cron

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An Article by Robert E. Cron titled:

Flood Control in Maricopa County

which appeared in

Watershed Magazine dated September 21, 1960

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Robert Edwin Cron

Cullum: 8893

Class: '30

Cadet Company:

Date of Birth: August 19, 1907

Date of Death: March 9, 1995 - [View or Post a Eulogy](#)

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**COLONEL
ROBERT EDWIN CRON, JR.**

CLASS OF 1930

Born in Sumner County, Tennessee. He received his appointment to West Point in 1926. After graduation, he was commissioned eventually the Coast Artillery Corps, the Quartermaster Corps, and the Corps of Engineers.

Bob's academic achievements grew with a two-year assignment in 1931 to the Carnegie Institute of Technology, where he received a master's of science in civil engineering. Later, he received the professional degree of Civil Engineer from Carnegie and completed the requirements of the freshman year at the schools of law of Georgetown and George Washington Universities.

His military education included an assignment to the Quartermaster School in Philadelphia, Pennsylvania.

His troop commands started with the 842nd Engineer Aviation Battalion, which he activated. By March 1943, the battalion was engaged in 3-shift operations at Port Moresby, Papua, New Guinea. The battalion then started construction of the first of seven runways used for heavy bombers.

Eventually, six heavy bomber runways, about 100 miles of dispersed hard stands and taxiways, 100 miles of roads, a POL tank farm, a station hospital, and many facilities, such as a photo lab for a reconnaissance squadron, were built.

Bob was deputy base commander in Lae. From Lae he moved to Hollandia to work on the base planning staff for the Leyte operation. On Leyte, he was base engineer and, later, Leyte District Engineer, commanding 8,000 troops.

After 34 months in the Pacific Theater, Cron reported for the Command Class at Fort Leavenworth. Completing the Army War College-level program, he went to the Army Air transport Command as A-4.

Bob returned to duty with the Army Chief of Engineers staff as executive officer, Military Construction. He served under the commanding general of the U.S. Army Section, Joint Brazil/U.S. Military Commission as Chief of the Arms Section and Chief of MAAG, Brazil.

Retiring from the Army in 1957, Cron was appointed to the faculty of Civil Engineering at Arizona State in Tempe, teaching courses in Planning for Civil Engineers, Highway Engineering, Law, Soil Mechanics, and Materials of Construction. In the latter two courses, he ordered and set up laboratories for student instruction.

Later, he was the first Chief Engineer and General Manager of the newly authorized Flood Control District of Maricopa County, initiating a countywide flood control study.

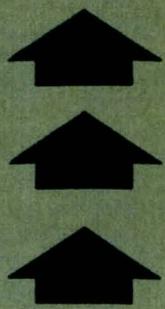
He then joined the Institute of Transportation and Traffic Engineering at the University of California, where he planned and managed an extensive ongoing program of short courses, seminars, and conferences in the transportation, engineering, and public works field.

He was president of the Rossmoor Lions, which has a multi-program of help for the hearing and seeing impaired. He was president of the California Quarter Century Club and a number of clubs in the adult community of Rossmoor. Completing his duties as president of the Rossmoor Republican Club in 1989, Bob accepted no more leadership positions.

During the course of his career, he received the Legion of Merit for his WWII service and the Brazilian Order of Military Merit.

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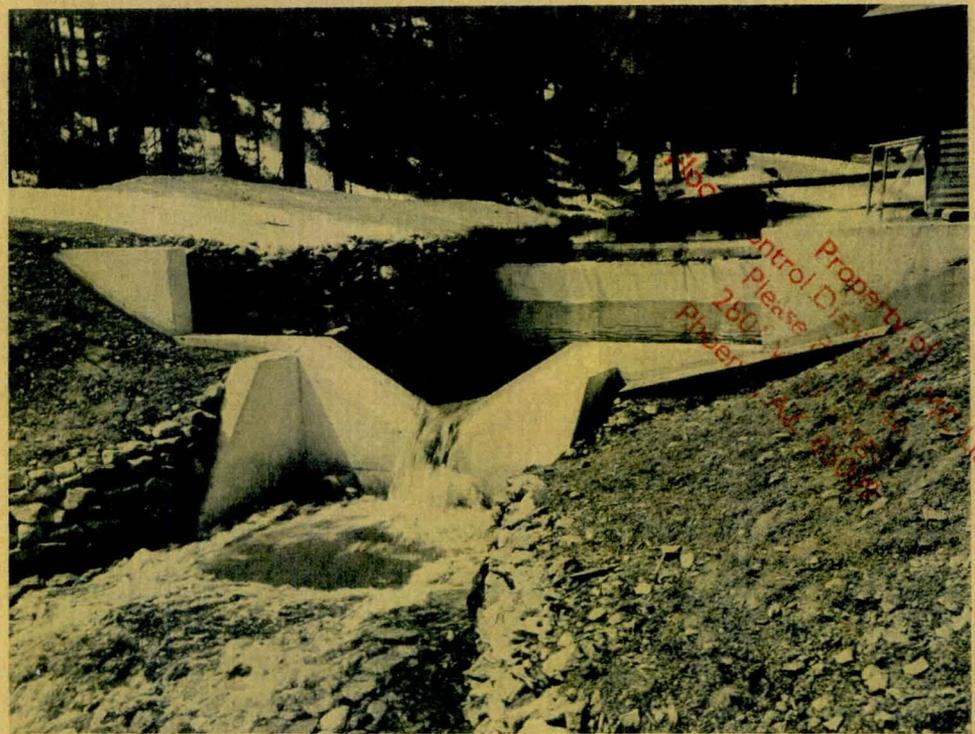


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Flood Control in Maricopa County

COL. ROBERT E. CRON, JR.
General Manager & Chief Engineer
Flood Control District of Maricopa County

IT IS INDEED A PRIVILEGE to tell you about the flood control program of Maricopa County. I am glad to see this subject included in a symposium on water resources management. The need for flood control in the county has been recognized for many years, and much already has been accomplished. The Painted Rock, Trilby Wash, Cave Creek and Whitlow Ranch Dams demonstrate that fact. But much remains to be done. A report by the Citizens' Flood Control Committee in 1958 suggested a program and how to accomplish it. As a result of this report, Phoenix, Maricopa County and the Salt River Valley Water Users' Association formed an interim organization called the Maricopa County Flood Control Agency. That agency did excellent work in proposing the legislation which culminated in the formation of the Flood Control District of Maricopa County in August of 1959. The first tax revenues become available this fall.

Today the program of the district is expressed in terms of hope and aspiration. Our first duty is to make a county-wide survey of flood control needs and to prepare a comprehensive program based upon those needs. Only after such a program has been formally adopted by the Board of Directors of the Flood Control District can adequate financing be obtained through the sale of bonds. Under interpretations made of our basic statute we cannot undertake any project until the comprehensive program is adopted. I feel that we ought to be able to proceed immediately with urgently needed work. My Citizens' Flood Control Advisory Board has expressed the same views. I have sought and will continue to seek legal and financial means to start individual projects now. If no such means are available then it is my personal opinion that the basic statute ought to be amended.

Among the Federal agencies interested in flood control, the Corps of Engineers of the Army already has

submitted to the Congress a plan for the amelioration of flood damages from the Salt and Gila Rivers. That plan has just been authorized for construction. It is a partial solution. The Corps, also, is studying a comprehensive plan for the local flood protection of metropolitan Phoenix from sources other than the Salt River. The Bureau of Reclamation is budgeting to study the feasibility of a multi-purpose dam at the Maxwell site across the Salt River just below the mouth of the Verde. In addition the Bureau, as a part of its studies of the Central Arizona Project, will consider a multi-purpose dam on the Hassayampa River at the Box Canyon site about ten miles northeast of Wickenburg. In the Southeastern part of the county, we have requested the help of the Soil Conservation Service in the planning and construction of flood control works under the provisions of Public Law 566. In other parts of the county we will undertake our own surveys. When the surveys are complete, we will assemble the reports into one comprehensive plan, to be presented under three headings:

- (a) Cooperation with Federal programs.
- (b) Design and construction of flood control works not included in Federal programs.
- (c) Master drainage and flood plain zoning plans in areas where construction is not yet economically justified.

Only after such a comprehensive program is adopted by the Board of Directors can we begin to speak in terms other than those of hope and aspiration. Very likely, that planning goal will be achieved during calendar year 1963. Nevertheless, today it is possible to speak speculatively of what we would like to accomplish and to relate some of the probable effects of our program on water conservation.

The Salt and Gila River project, already authorized provides for levees near Tempe Butte and near 40th

Street in Phoenix. Elsewhere, the plan contemplates restoring the channel to its natural capacity, which is in the range of 80 to 85 thousand cubic feet per second. Project economies, as developed by the Corps of Engineers, do not justify complete protection against the project flood of 271,000 cubic feet per second. Restoration of the channel to natural capacity will be accomplished through the construction of low flow channels in certain reaches, and the clearing of phreatophyte growth from a floodway 2,000 feet in width in other areas. This clearing program will result in a savings estimated to be at least 16,000 acre feet of water annually. At the value of \$8.00 per acre foot, it represents a direct water conservation benefit of \$128,000 per year.

Should the Bureau of Reclamation build the proposed multi-purpose dam at the Maxwell site, flood flows down the Salt River will be reduced to a probable maximum of 82,000 cubic feet per second. The river bed, without obstructions, would carry this flow.

The Maxwell Dam has many other benefits. It may be used for the terminal storage of Colorado River water for the Central Arizona Project. Minor power benefits should accrue from more flexibility in scheduling water releases from Stewart Mountain Dam. The advantages for fish and recreational purposes are great. The dam would cost about \$35 million. I believe benefits will greatly exceed this amount.

Proceeding to the further protection of metropolitan Phoenix, from sources other than the Salt River, we hope that the Corps study will show justification for the definite channelization of Indian Bend Wash. This will provide drainage for Paradise Valley, with peak flow estimated to be on the order of 70,000 cubic feet per second. Fortunately, it is not likely that this flow would occur simultaneously with the main stream peak of the Salt River. In order to collect this water with a minimum of damage, within the valley, we have proposed an intercepting channel having a direction of flow, roughly to the southeast into Indian Bend Wash.

Along the upper side of the Arizona Canal, a drainage channel is badly needed to protect that important irrigation facility and areas to the south of it.

From areas farther to the North and Northwest of Phoenix, flood flows have caused severe damage in the past. These damages could be reduced by improving the channels of Cave Creek, Skunk Creek and New River. We believe however, that it may prove cheaper to divert those flows by a system of intercepting channels, levees and detention basins. This system eventually would place flood flows behind a dam on New River, where there is an excellent site. At each levee, detention basin and dam built under this plan, flood releases could be made in non-damaging amounts. This system, we feel would provide some improvement in underground recharge. If there is no insoluble conflict in water rights, there may be opportunity for irrigation and fish and recreation storage at the New River site. In addition, a study is being made of the feasibility of diverting the upper reaches of New River into the Agua Fria basin. This would provide a more assured supply to Lake Carl Pleasant, for irrigation and recreational purposes.

South of Phoenix, an intercepting channel to carry flood waters originating in South Mountain will be considered.

In the southeastern end of the county, damage from Queen Creek is under control by Whitlow Ranch Reservoir. However, in this area severe damages have occurred in the past as a result of floods originating in the Utery and Superstition Mountains. In 1954, water from this source reached the town of Gilbert. Canals were breached, crops damaged and urban areas inundated. Major highways were flooded for a distance of several miles. I am glad to report that Pinal County, the Roosevelt Conservation District, the Salt River Valley Water Users' Association, Gilbert, Mesa, Chandler and all Soil Conservation Districts in the area of possible damage have cooperated with us in asking the Secretary of Agriculture for assistance.

Problems exist in many other parts of the county. We hope to help Wickenburg in a serious problem there. Indeed, our survey will consider every drainage basin in Maricopa County. In those areas where construction is not economically justified at the present time, we hope to work out an acceptable plan of flood plain zoning — a plan that will permit the maximum use of areas subject to flooding but with the least probable danger of property and life. As such areas become more heavily populated, it will become feasible to build flood control works and the rights-of-way will be free of obstruction.

Flood control is our primary interest but our viewpoint is not parochial. We believe in water conservation and the optimum use of water resources. To demonstrate this fact, let me quote from the Specifications for our comprehensive report: "Full consideration will be given to the multi-purpose use of flood control facilities".

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