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REPORT
to the
CALIFORNIA WATER COMMISSION

on Activities of the
Department of Water Resources

August 1995

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CALIFED BAY DELTA PROGRAM
EXECUTIVE OFFICE
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Sacramento, California
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WATER CONDITIONS

1995 Water Conditions

On August 1, storage in the State's 155 major reservoirs was 33.4 million acre-feet, 129 percent of average for this date. This is nearly 14 MAF more than one year ago when storage was 75 percent of average. This year's storage is nearly as much as in 1983 when August 1 volume was 34.8 MAF or 134 percent of average. Storage in 1986 was less at 30.9 MAF. Most reservoirs were full or nearly full sometime by late spring or early summer.

Some Central Valley basin reservoirs will be making anticipatory flood control releases to reduce storage to acceptable flood storage levels by late fall.

Runoff continues to be high for this time of year due to good reservoir flow and lingering late season snowmelt in the high Sierra. July monthly runoff turned out to be 330 percent of the monthly average with an accumulation so far for the water year of 182 percent. August runoff appears to have been more than 200 percent average. Normally August flows are quite low, contributing about 2 percent of average total runoff; last year August runoff was about 45 percent of average.

Statewide seasonal precipitation since October 1 remains about 170 percent of average compared to 65 percent last year.

The temporary stoplogs in Folsom Dam were installed during the second week of August. Storage in the reservoir leveled out at around 585,000 acre-feet for a few days before beginning a slow decline to meet water and power needs. At the end of August, Folsom Lake storage was about 570,000 AF.

State Water Project Supply and Deliveries

Total storage in the major State Water Project reservoirs was about 5.15 MAF on August 31, which is about 2.30 MAF more than the storage at this time in 1994. The August 31 storage at Lake Oroville was about 3.23 MAF compared to 1.81 MAF at this time last year. Our schedule is to drop Lake Oroville storage to the bottom of the Flood Control Envelope by the end of October.

The State share of San Luis Reservoir storage was about 1.06 MAF compared with 275,000 AF at this time last year. We will attempt to maintain the States share of San Luis near full capacity through next spring. The combined storage of our southern reservoirs was about 664,000 AF on August 31 compared with 616,800 AF at this time last year.

SWP water deliveries for 1995 through August 31, were about 1.27 MAF including project, transfer, and exchange water. This is about 26,000 AF less than the amount delivered during 1994.

BAY-DELTA WATER RIGHTS DECISION PROCESS

The State Water Resources Control Board held a workshop on August 29 and 30 regarding development of the water rights decision to implement the requirements for the Bay-Delta estuary contained in the Water Quality Control Plan adopted on May 22. This workshop focussed on issues associated with the San Joaquin River. A second workshop is scheduled for September 18 and 19.

BAY-DELTA RESOLUTION PROCESS (CALFED/STAKEHOLDERS)

The first public workshop of the CALFED Bay-Delta Program was held on August 3. Workshops will be held monthly during the scoping process. In addition to the workshops, which are held in Sacramento, informative public meetings will be held throughout the State. The workshops will focus on problem identification and definition of goals and performance measures, which will lead to the development of project alternatives. The first public meeting will be held on September 26 in Stockton.

The Bay-Delta Advisory Council met on August 16 and CALFED met the following day. Both groups were briefed on the status and schedule of the Bay-Delta Program. Each group will meet again in October.

The CALFED Ops Group met on August 24. Efforts are focussed on San Joaquin River conditions during the fall for salmon migration and developing a method of accounting for water supply impacts in order to fully utilize the operational flexibility provided for in SWRCB's Water Quality Control Plan and the Bay-Delta Principles of Agreement (December 15, 1994).

UPDATING THE SUISUN MARSH PRESERVATION AGREEMENT

Efforts are getting under way to update the 1987 Suisun Marsh Preservation Agreement between the Department of Water Resources, U.S. Bureau of Reclamation, Department of Fish and Game, and the Suisun Resource Conservation District. This Agreement assures that USBR and DWR maintain a dependable and adequate quality water supply within Suisun Marsh channels. An important feature of the Agreement is the Suisun Marsh Salinity Control Gates facility, which was declared operational on November 22, 1989 (about one year after initial operation).

On August 4, 1995, the Suisun Marsh Coordinators representing the four parties to the SMPA began discussions on updating the Agreement. The Coordinators established an ad hoc negotiating team and technical support team consisting of representatives of the four agencies to facilitate the amendment process. The negotiating team will meet in September to identify issues for discussion and specific articles in the Agreement that need updating.

ARROYO PASAJERO

The Arroyo Pasajero planning program has been transferred from the Division of Operations and Maintenance to the Division of Planning. During August, DWR activities were directed towards organization of the Arroyo Pasajero Multi-Agency Forum and reconnaissance-level investigations for alternative flood control facilities for Cantua and Salt Creeks. Invitation letters to Forum Participants are being finalized. The first meeting of the Forum is expected in October.

On July 27, 1995, the U.S. Army Corps of Engineers gave Northwest Hydraulic Consultants Inc. the notice to proceed with a sedimentation study for the Arroyo Pasajero. This study will identify the primary sources of sediment and most effective measures to control or reduce sediment movement. The findings of this study are essential to the formulation of a cost effective flood control plan.

DELTA PLANNING

West Delta Water Management Program

DWR continues to work with the Twitchell Island engineering consultant on the use of DWR property as a potential location to place dredged material from the Interim South Delta Program for future use as levee material. Areas have been identified as storage locations and we will conduct soil and water quality sampling and seek permits from the Regional Water Quality Control Board. Additional sites on Sherman Island are being considered as part of the SB 34 program and they will also be reviewed as potential ISDP stockpile areas.

North Delta Program

Staff continues work on environmental and engineering studies for the North Delta Program. This work includes resource evaluation studies, hydrodynamic and water supply modeling, and refinement of alternative project descriptions. Efforts are under way to assure that these studies are compatible with the CALFED Bay-Delta Program.

Interim South Delta Water Management Program

Comments on the administrative draft Environmental Impact Report/Environmental Impact Study have been received from National Marine Fisheries Service, the Corps, and USBR. We have met with DFG to discuss their comments and anticipate receiving their written response soon. We are awaiting comments from the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service. Staff is reviewing the comments received thus far and developing responses.

Several outreach meetings have recently been held to brief interested parties on the ISDP and the administrative draft EIR/EIS, including briefings with the CALFED Operations Group, EPA Region 9, and boating interests in the south Delta. The meetings have been beneficial and productive. A project update for ISDP has been completed and will be mailed to interested parties soon.

U.S. Army Corps of Engineers Delta Planning Activities

Several study coordination activities have been advancing with the Corps. These studies are in connection with planning activities and are separate from their regulatory authority. Significant changes from previous Corps planning involvement include: (1) Greater nonfederal sponsor authority in study guidance and decisions; (2) broader findings of federal interest, including navigation, flood control, environmental restoration and fish migration; and (3) establishment of separate study actions which provide for improved decision-making flexibility.

The Corps has demonstrated federal interest in Delta protection and expansion of this interest into areas of environmental restoration is beneficial because their expertise and federal cost-sharing potential is important to the success of each program. DWR is supporting and coordinating these actions to include interaction with the Delta Protection Commission and EPA. As a nonfederal sponsor, it is important for the State to receive credit for State expenditures under SB 34 during the Corps study period.

Joint Corps/DWR/Reclamation Board Levees Investigation

The Corps' South Pacific Division has completed review of the draft Phase II agreement. The draft work program is being revised to respond to the Division's comments.

It is expected that the amendment to the feasibility and cost-sharing agreement, which includes the Phase II work program, will be signed in November. The cost estimate for the Phase II work is \$3,793,000, of which the State, as local sponsor, is responsible for one-half. Of the total cost, approximately \$1,464,000 is to cover the design and construction of a 2,500-foot test levee section. Inclusion of a test program into a feasibility and cost-sharing agreement is an innovative step by the Corps, and is responsive to State requests to maximize available funds for field actions rather than report preparation.

Corps Three-Island Study

The Western Delta Reconnaissance Study covering Webb, Jersey, and Twitchell Islands is complete. The study report indicates a federal interest in flood control and environmental restoration on the three islands. Because of existing local plans for developments on Webb and Jersey Islands, the report recommends a feasibility level study covering Twitchell Island only at this time. A draft project study plan for the proposed feasibility study is being reviewed by Corps' headquarters. A decision to proceed with the feasibility study may be made at a Corps management meeting scheduled for August 30. DWR supports the feasibility study and plans to act as the local sponsor for the project. The feasibility study is estimated to cost \$1,746,000, of which the local sponsor pays one-half.

Other Corps Activities

Other Corps studies which add to the productive involvement by the Corps in Delta protection activities include: (1) a recently completed reconnaissance study of habitat restoration potential on Prospect Island (a Category III funding proposal is being pursued for this project); (2) a Sacramento Deep Water Ship Channel investigation to provide access for upstream migrating salmon; (3) the Long-Term Management Strategy for disposal of dredged sediment, including reuse of dredged sediment as a source of levee construction material; and (4) a reconnaissance study of habitat restoration potential on Little Holland Tract and Liberty Island. Further coordination is planned for the Corps participation during emergency conditions in accordance with established PL 99 levee standards.

Special Projects

Sherman Island

DWR's SB 34 Special Projects program has entered into a work agreement with Reclamation District 341 (\$300,000) to investigate Sherman Island's 9.8 miles of nonproject levees, and a dredge material borrow and rehandling study of the DWR-owned properties. The District's engineering consultant has completed exploratory borings and is working on design levee sections and obtaining environmental permits.

Twitchell Island

In June 1994, portions of the Twitchell Island levee slope along the San Joaquin River slumped during placement of riprap erosion protection. DWR subsequently entered into a work agreement with Reclamation District 1601 to provide SB 34 cost-sharing necessary to perform geotechnical and engineering evaluations and construct 3,000 feet of setback levee. Construction began August 14, and is scheduled to be completed by November.

Thornton/New Hope Levee Improvement Project

In July 1994, construction began on a 5.4 mile Mokelumne River levee project that protects the town of Thornton and New Hope Tract. About 2.8 miles of the project was

completed during 1994; the remaining 2.6 miles originally scheduled for 1995 has been delayed until next year because of high flows in the Mokelumne River. Sculpting and planting of the 35-acre Grizzly slough mitigation site is scheduled for this September.

SOUTH-OF-THE-DELTA OFFSTREAM RESERVOIR STUDIES

Planning activities for the Los Banos Grandes Facilities were scaled back in 1993, when Delta endangered species concerns raised questions about Delta exports and the project's feasibility. Until long-term availability of Delta exports can be established, only limited work specific to LBG will continue. This work is to maintain the viability of previous environmental studies at the LBG site and continue long-term studies to address potential impacts and mitigation for California sycamores and San Joaquin kit foxes.

Due to changes in environmental regulations and water supply conditions since previous studies were completed, DWR is reassessing all potential south-of-the-Delta offstream reservoir sites to determine the location and size that best meets current conditions. The LBG site will be among those considered. This study will use a two-stage evaluation process to select alternative reservoir sites for possible future feasibility-level study. The study will be coordinated with an integral part of DWR's ongoing scoping process for the SWP Planning Strategy.

Approximately 60 alternative reservoir sites have been identified for the first-stage evaluation. Engineering, environmental, economic, and institutional factors of each potential site will be considered at a general level. Screening criteria will be developed with input from SWP contractors, federal and State regulatory agencies, and others. A report on the first-stage evaluation is planned for completion this December. The second-stage evaluation will provide a more detailed analysis of those alternatives passing the first-stage screening, and will result in recommendations for feasibility-level study. The second-stage evaluation is scheduled for completion in December 1996.

CENTRAL VALLEY PROJECT

HR 1906, introduced by Senator Doolittle to amend the CVP Improvement Act, was heard before the House Subcommittee on Water and Power Resources on July 20. Testimony in support of amending CVPIA was provided by agricultural and urban water users, while environmental interests testified in opposition. USBR Commissioner Dan Beard presented the federal position that it is premature to amend CVPIA so soon after its enactment, and that the water users' concerns with implementation of the act could be addressed by administrative, rather than legislative, means. Key provisions of HR 1906 include those dealing with CVP water contract administration and water conservation requirements, restoration fund charges, transfers of project water, the anadromous fish doubling program, and water dedicated for environmental purposes.

The Central Valley Project Authority voted at its recent Board meeting to submit proposed bill language to Congress calling for the transfer of the CVP to the Authority. USBR, as part of its westwide program to transfer title of reclamation projects to non-federal entities, held a series of public meetings in California on the federal strategy for carrying out this proposed program. USBR's program generally focuses on projects whose transfer could be expected to be relatively uncomplicated, could be accomplished with National Environmental Policy Act compliance at a level less than that of an EIS, and would not entail transfer of hydropower facilities.

SACRAMENTO VALLEY CONJUNCTIVE USE

DWR is continuing its investigation of the potential to increase SWP supplies through development of conjunctive use projects in the Sacramento Valley. We have recently begun a prefeasibility study of the northern Yolo and southern Colusa County area. The study is in cooperation with Reclamation District No. 108 and the Yolo-Zamora Water District. The study will focus on methods of developing dry year supply for SWP, providing information to aid local water resource managers and alleviating land subsidence that is occurring in the area.

DWR has completed its Phase II investigation of the potential for conjunctive use at the M&T Chico Ranch in Butte County. The study recommends development of a long-range conjunctive use plan to serve as a basis for developing a water purchase/exchange program. We are continuing to work with local interests to assure that conjunctive use projects will lead to acceptable water management activities.

SAFETY OF DAMS

Recap of the Folsom Gate Incident

At 0820 on July 17, Radial Gate No. 3 on Folsom Dam was being opened to replace a curtailed 7,500 cfs power plant release. The plant was going off line at the request of the Western Area Power Administration. The operator noticed an unusual vibration when the gate reached 2.5 feet open and turned to see the gate fail. The right arms buckled and the gate skin plate opened to approximately 45 degrees to the dam axis allowing some 40,000 cfs to be released suddenly into the American River. There are a total of eight gates with dimensions of 42 feet wide by 50 feet high; three of these control the emergency spillway. The reservoir head on the gate at time of failure was 48 feet. During the next several weeks, the reservoir lost some 350,000 AF and 38 feet of elevation until Bay 3 was stoplogged during the week of August 7.

USBR has asked Vern Persson, Chief of Division of Safety of Dams, to serve on the forensic team of their Task Force to determine why the gate failed. Steve Kashiwada from our Design Office will coordinate items on design and operation while serving on the Task Force component for the gate replacement. In addition to the local staff and the staff from the Denver Engineering Center, USBR has asked other agencies to contribute to the Task Force elements as well. They include: the Corps, California Department of Transportation, and McClellan Air Force Base.

The failure has caused concern among dam owners with similar gates. There are 58 dams in State jurisdictional status with radial gates; six of these are owned by DWR. In addition, there are nine federal dams which employ this type of gate. The State Senate Committee on Agriculture and Water Resources has asked DWR to report to them on the scope of the potential problem. In an independent action, DSOD is requesting each jurisdictional owner to perform inspections of their gates and report status to the Division.

Los Vaqueros Bid Opening

Contra Costa County Water District opened bids for construction of 197 foot high Los Vaqueros Dam on July 28. The apparent low bid of \$42,590,000 was submitted by Kiewit Pacific Construction Company, Concord office. There were eight bidders. The engineers estimate was \$72 million. Construction of the dam should be completed by the end of 1997.

STATE WATER PROJECT OPERATIONS

The Operations Control Office has moved to the Interim Water Operations Control Office at El Camino and Watt Avenues along with USBR, Flood Management, and the U.S. Weather Bureau.

SWP worked with Water Contractors on sediment problems in the San Luis Field Division caused by side flows from Cantua Creek, Salt Creek and Arroyo Pasajero.

Alamo Power Plant Unit #1 testing with the permanent air injection system has been completed and the unit is now available for loading at the full name plate rating of 18 MW.

Clifton Court Forebay was sprayed with a herbicide to control pond weeds on August 21 and 22. This is the second application this year.

East Branch Pool 49 has developed several deep cracks in the operating road on the primary side of the aqueduct. Elevations and flow through this pool have been restricted until repairs can be made. (Scheduled during the month of October)

STATE WATER PROJECT DESIGN AND CONSTRUCTION

Coastal Branch - Phase II

The first Coastal Branch Phase II contract, to furnish fiber optic cable from Devil's Den Pumping Plant to Vandenberg Air Force Base is complete and was accepted on August 22. The last major contract to construct the last two pipeline segments (Reaches 5A1 and 5A2), was awarded to Homer J. Olson of Union City on August 11. The combined bid for the two reaches was \$48,128,936. The engineer's estimate was \$47,370,000.

Reach 1, excavation, backfill, and concrete encasement continues, with 62,504 linear feet of 57-inch pipe delivered, 62,005 linear feet installed. Reach 2, to date, 81,730 linear feet of 48-inch pipe has been delivered, and 47,707 feet have been installed. Reach 3, to date, 31,950 linear feet of 48-inch pipe have been delivered, with 26,950 feet installed. Reach 4, Calf Canyon tunnel has been bored 1,750 feet. Pipe trenching and fabrication of 51-inch steel pipe sections and specials are in progress.

The Cuesta Tunnel contractor completed flotation of 24-inch Nacimiento pipe through the Cuesta tunnel and is working on the south portal adit.

San Bernardino Tunnel Intake Structure Replacement

Contract has been awarded to Shank/Balfour Beatty of San Francisco for a bid of \$23,080,315. On-site work will not begin until after the Labor Day holiday to reduce impacts on Lake Silverwood summer recreation activity.

Santa Ana Valley Pipeline Repair

Hemet Manufacturing Company, Inc. DBA Genesis Construction, with a bid of \$1,680,000, was awarded a contract to excavate, inspect, and repair prestressed concrete pipe on the Santa Ana Valley pipeline as required. The DWR estimate for this work was \$1,597,500. This contract completes investigation of sites identified as potential problem areas. Investigations of sites believed to be more serious were conducted, and repairs were made under a previous contract, Specification No. 91-19.

Alamo Powerplant

We are pleased to report that after much time and effort, the problem which limited the power output of Alamo Powerplant has been corrected. You may recall the unit was plagued by excessive vibration when it was separated from the system on a load rejection and went into overspeed condition.

Resolving the problem entailed much analysis by Design and Construction staff and others, and manufacture of a larger shaft, modification of bearings and bearing supports, and eventually very careful alignment and adjustments when the unit was reassembled by the Southern Field Division. On subsequent testing, the unit still seemed to vibrate excessively during overspeed. The ultimate answer turned out to be injection of air into the turbine head cover during load rejection, coupled with a new procedure developed by DWR mechanics to adjust the lower generator guide bearing to a tighter tolerance. The air seems to blow the turbulence out the draft tube, and the tighter bearing provides vibration damping. Tests employing temporary air injection in late April showed that vibration was reduced sufficiently to allow generation up to the unit's full rating of 18 MW. Previously, generation was limited to only 8 MW, requiring occasional bypassed water and resulting energy loss.

Ironically, air injection was tested early in the investigation without improvement. Evidently, the quantity of air was insufficient then, and the other changes in the unit to make it more stable were a prerequisite to the air injection's success. In any case, as of August 18, a permanent air injection has been installed by the Field Division, and testing confirms the capability of increased loading. As of that date, the unit has been released for normal, unrestricted service.

LOCAL AGENCIES DEVELOP URBAN WATER MANAGEMENT PLANS

Pursuant to Water Code Section 10610, et seq, enacted in 1983, all water agencies providing water to more than 3,000 customers or supplying more than 3,000 AF per year must have urban water management plans. These plans are a tool for effective water resources management.

Plans were initially filed with DWR in 1985, and revised plans were filed in 1990. The 1987-1992 drought resulted in additional legislation, which directed the agencies to prepare and file water shortage contingency plans in 1992. DWR continues to assist 350 local water agencies to prepare urban water management plans. Updated plans are due by December 31.

SAN JOAQUIN RIVER MANAGEMENT PROGRAM

The San Joaquin River Management Plan was released to the public the first week of August. The Plan, mandated by the Legislature under AB 3603, was mailed out to all members of the SJRMP Advisory Council as well as other interested parties. The long awaited Plan is receiving interest, with multiple copies being requested by DFG, USFWS, USBR and the Friant Water Users Authority.

The SJRMP Action Team is pursuing potential funding of action items identified in the Plan with CVPIA-related programs. Other potential funding opportunities, such as Bay/Delta Category III funds, and Hazard Mitigation Grants are also being pursued.

DELTA PROTECTION COMMISSION

The Delta Protection Commission held a public meeting and an executive session on August 24. At the Executive Session the Commission discussed the lawsuits filed against the DPC related to disposal of reclaimed water and sludge in the Delta. Prior to the Full Commission meeting, the DPC levee subcommittee met. The subcommittee was briefed by staff from the Corps on their activities in the Delta. The subcommittee also discussed the Federal Emergency Management Agency and Office of Emergency Service role in the Delta, regulatory issues, and wave erosion associated with boating.

LOAN AND GRANT PROGRAMS

Safe Drinking Water Bond Law of 1988 (Proposition 81)

The San Luis Obispo County Service Area 10A (Cayucos) received a \$2,200,000 loan commitment for its domestic water system project.

Clean Water Bond Law of 1984 (Proposition 25)

The Tuolumne Water District completed its water conservation project. The District expended \$2,410,000 in loan funds.

Water Conservation Bond Law of 1988 (Proposition 82)

The Mojave Water Agency in San Bernardino County completed its Hi Desert Pipeline Extension groundwater recharge project. The agency expended \$5,000,000 in loan funds.

The Semitropic Water Storage District in Kern County received an amendment to its contract. The District received a \$143,000 increase in its loan for a new total loan amount of \$3,510,000.

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