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Thomas M. Stetson

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QUALITY MEETS QUANTITY
SAN GABRIEL VALLEY, CALIFORNIA

THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA PROPOSAL

Thomas M. Stetson
President
Stetson Engineers Inc.
San Clemente, California

UNCOVERING THE HIDDEN RESOURCE:
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IN THE 1990s

Natural Resources Law Center
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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA PROPOSAL

Thomas M. Stetson*
June 17, 1992

I. Introduction

A. After more than 10 years of litigation, studies, negotiations, and public elections, the Main San Gabriel Basin Judgment was entered on January 4, 1973,¹ and the Basin through a Court-approved physical solution was placed under the management of a Court-appointed 9-member Watermaster. Preceding this Judgment another Los Angeles County Superior Court Judgment had been entered which divided the waters of the San Gabriel River system at Whittier Narrows (the Lee Ferry of the San Gabriel River).

That earlier adjudication was brought by the cities of Long Beach and Compton and the Central Basin Municipal Water District (downstream of Whittier Narrows, the Lower Area) in order to obtain a declaration of Lower Area rights to San Gabriel River system water. That case is known as the Long Beach case² and Judgment was entered on September 24, 1965, more than six years after the suit was filed on May 12, 1959.

*** President, Stetson Engineers Inc., San Clemente, California.**

¹ Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al. Los Angeles County Superior Court Case No. 924128.

² Board of Water Commissioners of the City of Long Beach v. San Gabriel Valley Water Co., et al, Los Angeles County Superior Court Case No. 722647.

B. The Long Beach case was filed because only a small portion of the easterly part of the Main San Gabriel Basin was then eligible to receive supplemental (imported) water. Lower Area interests felt that increased uses of water in the Upper Area would reduce the share of local water reaching the Lower Area. In addition, four cities in the Upper Area (Azusa, Sierra Madre, Alhambra and Monterey Park) had joined together to form the San Gabriel Valley Municipal water District in 1959 for the express purpose of not annexing to the Metropolitan Water District of Southern California (MWD), and the public pronouncement of that helped precipitate the filing of the suit.

During the pendency of the Long Beach case, the Upper San Gabriel Valley Municipal Water District was formed on January 6, 1960, and annexed to MWD in early 1963, thereby becoming eligible to receive supplemental water imported by MWD. Meanwhile, the San Gabriel Valley Municipal Water District entered into a supplemental water supply contract with the California Department of Water Resources on November 3, 1962, to import its own supplemental water from northern California.

C. In the early 1970s there was considerable interest expressed by MWD and the California Department of Water Resources regarding conjunctive use programs whereby imported water could be stored in southern California ground-water basins in above normal years of supply and be extracted from those basins in years of below normal supply. This was not a new concept. One of the early studies made by MWD in the 1930s considered storing imported

Colorado River water in such basins and, indeed, MWD established special discount rates for "replenishment" water as early as 1958 to encourage underground storage of imported water.

The Main San Gabriel Basin Judgment was drafted to permit conjunctive use, but only for the purpose of supplying supplemental water to the Basin. It prohibits a conjunctive use operation which would extract the previously stored water and export it to areas other than those specifically allowed in the Judgment. This was done after considerable discussion and deliberation at the time the Judgment was being drafted.

However, at that time no one was aware that within several years after entry of the Judgment water quality would be measured in parts per billion (ppb) and that there were volatile organic compounds (VOCs) in the Basin that would have maximum contaminant levels as low as 0.5 ppb to 5 ppb.

- D. The Basin now faces a classic case of Quality meets Quantity. The discovery of high levels of VOC in the Basin in December 1979, the subsequent investigations and placing of the Basin on Superfund in 1984 makes it obvious that it will require decades in time and hundreds of millions of dollars to clean up the Basin. That is why the Main San Gabriel Basin Watermaster and other local entities are working with staff of the MWD to determine the feasibility of a large scale conjunctive use operation that could be utilized to expedite Basin cleanup.

II. The MWD Proposal

A. MWD proposes to use the Main San Gabriel Basin for a large conjunctive use and water quality cleanup project. MWD would import large quantities of surplus water (surplus to MWD's then current delivery requirements) and store it in the Basin. Maximum stored quantities may be as much as 500,000 acre-feet. MWD would maximize the use of existing water spreading facilities for the replenishment of the Basin.

MWD would construct extraction and treatment facilities, probably in close proximity to its Middle Feeder, which runs from east to west through the Basin. That feeder has a capacity of 250 cubic feet per second, or about 500 acre-feet per day. Though not yet decided, it is conceivable that MWD could extract and treat on the order of 50,000 to 100,000 acre-feet per year. Total annual extractions of water from the Basin over the past five years have average about 235,000 acre-feet.

B. Because producers from the Basin have been able to meet the delivery requirements to their customers, it is anticipated that practically all of the water extracted and treated by MWD under the conjunctive use program will be exported through its existing pipelines. This assumes that MWD's large scale extractions will control contaminant migration. If it does not, there may be reason to shutdown some existing wells and to substitute MWD treated water to replace that local water production.

C. In order to obtain the right to develop a large scale conjunctive use operation in the Basin, MWD must have the support of the water producers, Watermaster and other local entities to seek the proper amendments to the Basin Judgment. MWD has several large major water transmission pipelines through the Basin near to or along which large extraction and water treatment facilities could be constructed. The extracted and treated water, to the extent that it is not utilized within the Basin, would be exported to other portions of MWD's service area.

D. The benefits to MWD would be large scale storage capacity for surplus water, which it needs, in the heart of its service area. As an example, MWD is now proposing to construct a large surface reservoir in Riverside County which will have a capacity of about 800,000 acre-feet, cost more than one billion dollars and have a surface area of about 4,000 acres which will result in the loss to evaporation of a large amount of expensive, imported water.

The benefits to Basin users if the proposed conjunctive use project is feasible, will be a much more rapid cleanup of the Basin, more direct control of the movement of contaminants and less costs to the water producers, who, after all, are the victims of the contamination.

III. Basin Operations.

A. The Basin is operated under the Judgment to assure that all beneficial uses can be met. Producers were adjudicated water rights which entitle them to a share of the annual production each year, Operating Safe Yield. This is the

portion of the water produced which is free of the obligation to pay for imported water. There is no restriction on the quantity which a producer party may extract each year so long as it is beneficially used. But if a Producer extracts more than his share, he is then assessed at a rate (Replacement Assessment) that will purchase one acre-foot of supplemental water for each acre-foot of excess production. The supplemental water is then purchased by Watermaster from the proper municipal water district (Responsible Agency) and used to replenish the Basin in the following year.

- B. The Main San Gabriel Basin is a large ground-water basin. It is estimated to contain about eight million acre-feet of usable water. It is as much as 2,000 feet deep and responds rapidly to replenishment by local rainfall and runoff in normal or above-normal years. It contains about fifteen separate water spreading facilities as well as about 12 miles of soft-bottom streambed along the San Gabriel River. These facilities are used for replenishment of the Basin with imported water when not needed for local water.

During 1991 the Basin was drawn down to its historic low level, which represented the utilization of about one-million acre-feet of the eight-million acre-feet of usable water in storage.

- C. Because the Main San Gabriel Basin is upstream and upslope from the coastal plain of Los Angeles County, and because the coastal plain depends upon a very important ground-water basin, Central Basin, there is a great concern to control the migration of contaminants downslope. At Whittier Narrows, the

division point between the Upper Area and the Lower Area, ground water in the amount of about 30,000 acre-feet per year flows as subsurface flow into Central Basin.

D. Extracting large quantities of ground water through the proposed conjunctive use program upstream may have some impacts (either beneficial or detrimental) on such subsurface flows and will be a concern of the Basin Watermaster as well as the River Watermaster. Conceivably the beneficial impact could be controlling contaminant migration, a quality element. But with the large quantities of water extractions, there could be a diminution in the quantity of subsurface flow--an important element in meeting the annual water supply obligation to the Lower Area under the Long Beach case. Once again Quality meets Quantity.

E. There are other matters of concern which must be addressed and resolved in the studies to develop a feasible conjunctive use/cleanup program. Among them are: (1) the availability of water to import to the Basin and (2) the availability of water spreading facilities in order to replenish the Basin.

(1) The State Water Project (SWP) faces future limitations on diversions from the Sacramento-San Joaquin Delta and when surplus water becomes available there will be a limited time over which to divert it southward. There will be competition for such surplus water when it is available among the various SWP contractors and the State Department of Water Resources (DWR) itself. DWR recently acquired some 20,000 acres of

land in Kern County to develop the Kern Water Bank--a large conjunctive use program to supplement SWP water supplies.

(2) For the past several months, virtually all of the water spreading facilities in San Gabriel Valley have been fully used to spread local runoff and streamflow. No imported water has been spread since late January. That is because there was above-normal rainfall in the area during February and March. Upstream reservoirs in San Gabriel Valley were filled and refilled and the water released fully utilized all of the major water spreading facilities. It will be after mid-May, before imported water can be spread.

F. Imported conjunctive use water would be deemed to float on top of the local ground water. It would not be prudent to fill the Basin with imported water and have subsequent local runoff and streamflow waste to the ocean. That is one reason that the Main San Gabriel Basin Judgment contains a restriction on spreading imported water in the Basin when the ground-water surface reaches a certain elevation.

These matters are being addressed in the ongoing cooperative studies. Depending upon their ultimate resolution, they could limit the magnitude of the conjunctive use/cleanup project rather than the project itself.

IV. Discussion

A. MWD relies on two sources of imported water, the Colorado River and northern California, both of which are subject to significant shortfalls. It has

appropriative rights as well as contractual rights to the delivery of 1,212,000 acre-feet per year from the Colorado River. Unfortunately 662,000 acre-feet of that quantity exceeds the maximum annual limitation imposed by the U.S. Supreme Court on California users unless a surplus water situation is declared by the Secretary of the Interior. Even its remaining 550,000 acre-feet is subject to further reductions by "present perfected rights."

MWD's contract for northern California water from the State Water Project (SWP) is in the amount of about 2,011,500 acre-feet per year as a maximum annual entitlement. Unfortunately, the aggregate of all SWP contracts is about 4.2 million acre-feet per year and the project cannot deliver even one-half of that amount in dry years. (MWD delivered 2.5 million acre-feet of water to its constituent agencies in fiscal year 1989-90.)

This requires MWD to be innovative in developing additional sources of supply and in stretching the supplies it does have. The proposed conjunctive use plan by MWD will be a valuable asset if the costs prove to be feasible.

- B. The EPA and RWQCB source investigation program in San Gabriel Valley should result in a significant number of PRPs being identified which should assist in the funding of the MWD conjunctive use project. Both EPA and the Main San Gabriel Basin Watermaster have indicated that a large scale conjunctive use/cleanup project, if found to be feasible, could play a large and important roll in Basin cleanup.
- C. Although the MWD conjunctive use project will be expensive, some, if not

much, of the costs should be borne by potential responsible parties (PRPs) who caused the contamination. Until the MWD project is formulated sufficiently to analyze the locations of the major replenishment, extraction and treatment facilities, it is not possible to identify and quantify the potential impacts of the project on Basin water movements, individual producers, or other persons, facilities or environments which may be impacted. As the project is formulated and goes through the CEQA/NEPA process, these potential impacts may be identified and quantified.

- D. Manifestly, the U.S. Environmental Protection Agency, and many state regulatory agencies, must be involved in this project, as well as the local agencies including the River and Basin Watermasters.
- E. The Basin interests, Main San Gabriel Basin Watermaster, Upper San Gabriel Valley Municipal Water District, San Gabriel Valley Municipal Water District and San Gabriel Valley Water Association (an association of water producers in the Basin), adopted a Joint Resolution in February 1989 declaring their firm resolve to protect the quality of water in the Basin and proclaimed their agreement and intent to diligently pursue the principles set forth in that joint resolution to the end that contamination of Basin water would be controlled. Those entities expressed their firm belief that they must be involved in the preservation and restoration of the quantity of local ground-water supplies and that there must be close cooperation among the adopting entities and federal, state and regional authorities, as well as the Basin producers to achieve those goals.

The local entities formed a Joint Powers Authority known as the Main San Gabriel Basin Water Quality Authority, which now has one cleanup facility in operation and several others on the drawing boards. That agency may be replaced by a legislatively created water quality authority which is now pending in the California legislature.

- F. To date, the EPA, among other things, has conducted extensive studies in the Basin, funded part of the staff of the Regional Water Quality Control Board, Los Angeles Region (RWQCB), which is the state agency conducting the source investigations for VOC contamination, and funded and constructed one small treatment facility for Richwood Mutual Water Company. In April of 1990, the EPA released a draft San Gabriel Basinwide Technical Plan report identifying the Azusa-Baldwin Park area as the area of first priority for large cleanup facilities.

EPA is now nearing completion of a remedial investigation/feasibility study of the so-called Azusa-Baldwin Park area. It is scheduled to be available for public review in the fall of 1992. This is the same area in which the MWD proposed conjunctive use project is focused. Hopefully, the EPA report will furnish additional information on which to base findings for the feasibility of the MWD conjunctive use project.

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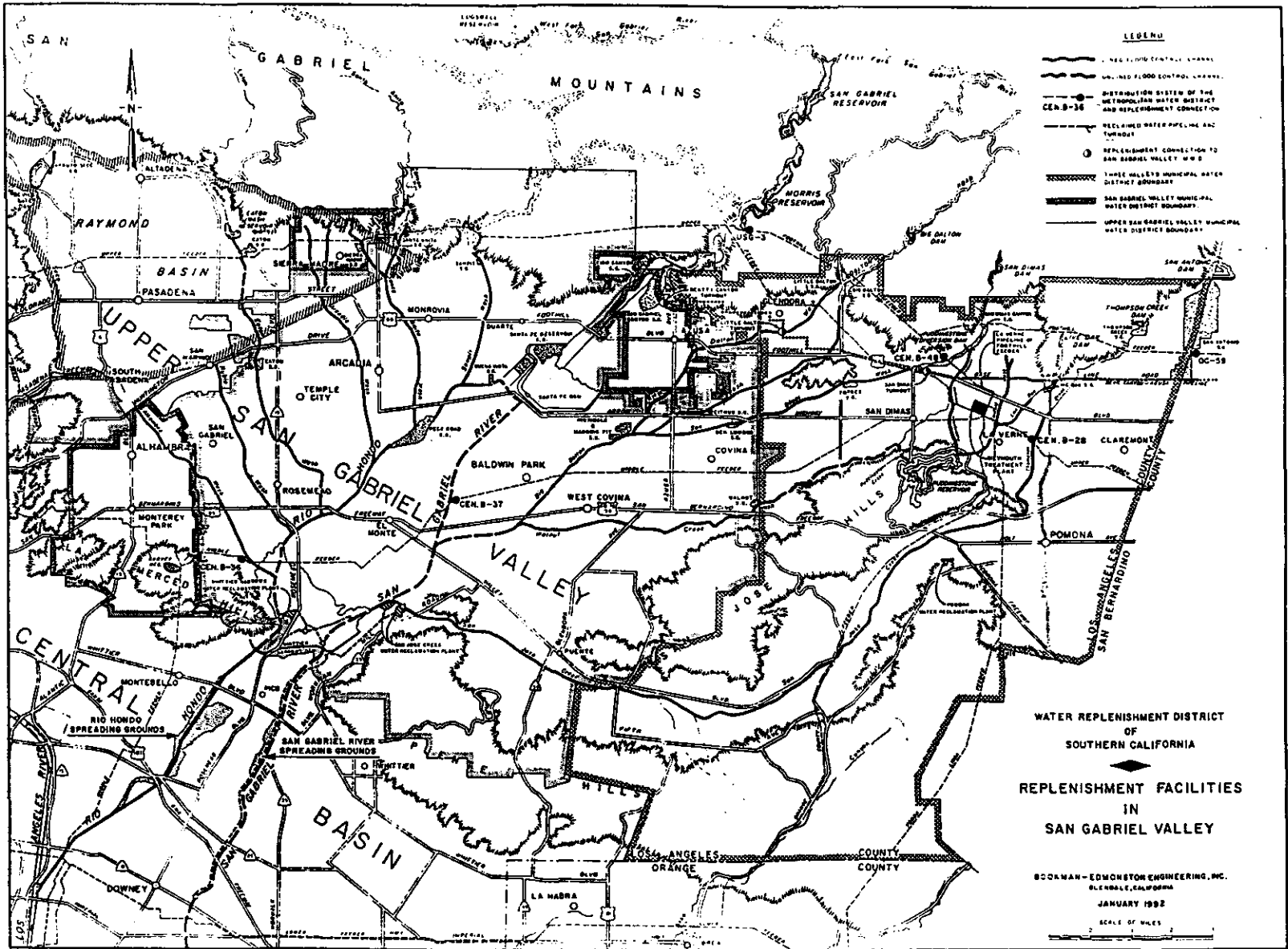
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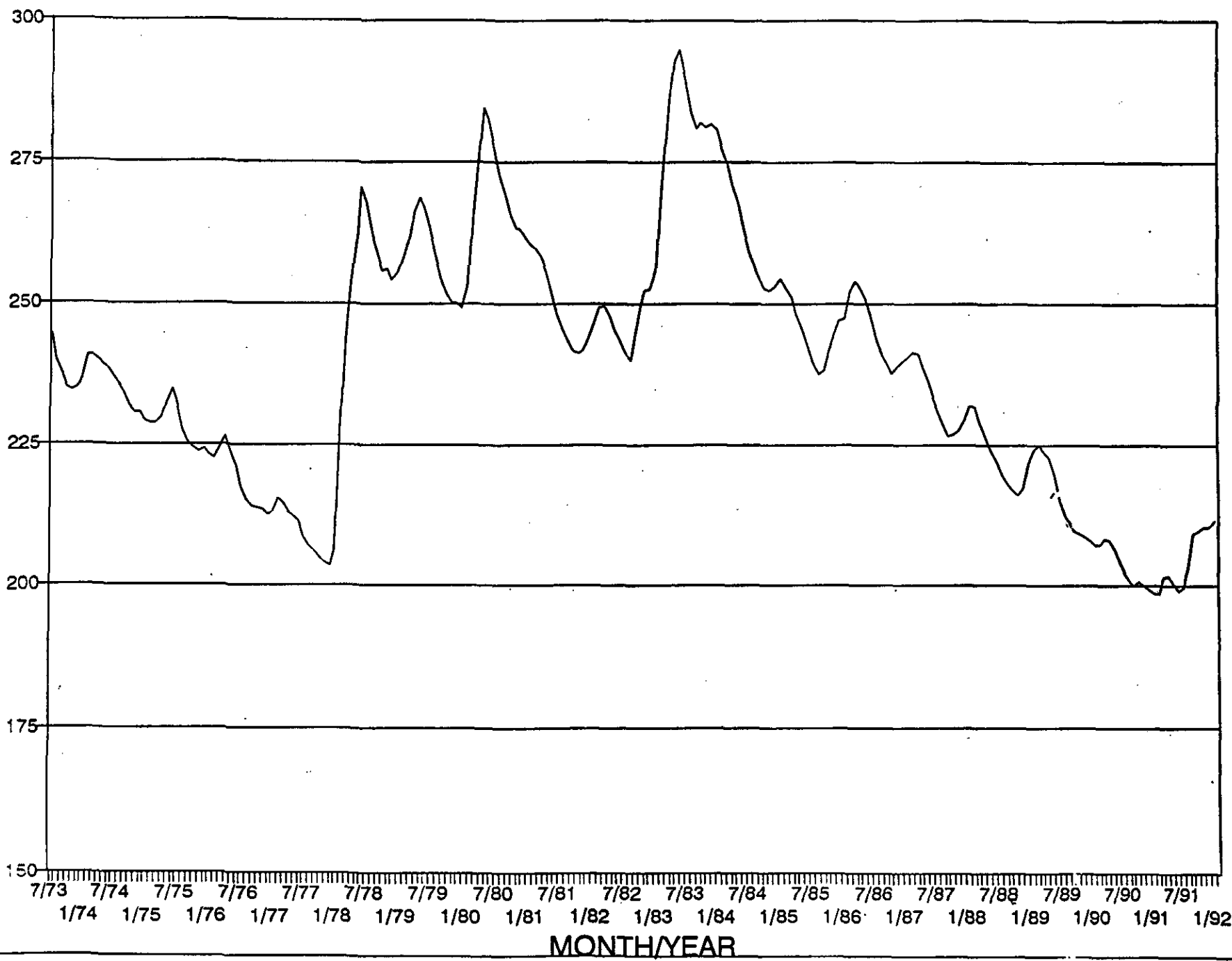
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