

CHRONOLOGY OF THE RAYMOND BASIN

- 1880 Southern California land development boom begins
- 1881 First wells drilled in Raymond Basin to supply water for irrigated agriculture and expanding municipalities.
- 1908 U.S. Geological Survey report on Raymond Basin published, showing 141 wells in operation.
- 1913 Overdraft of Raymond Basin begins
- 1914 City of Pasadena Water Department initiates a program to replenish the basin by conserving and spreading storm runoff on gravel beds at the foot of the San Gabriel Mountains. Pasadena continued the spreading program until 1924, by which time it had replenished the basin by more than 20,000 AF, using water that otherwise would have made its way to the Los Angeles River
- 1924 Pasadena terminates its spreading program partly because of the sharp decline in available runoff due to another dry cycle that began in 1922. Through the remainder of the 1920s, underground water levels dropped, some wells failed and longer pumping lifts raised operating costs in the others. The drop in water levels was not just seasonal; they no longer recovered in the spring.
- Raymond Basin users continued to pump groundwater without fully understanding the effects of their actions on each other and on the basin. A full description of the basin's geology and underground water storage characteristics did not appear until 1934.
- 1928 In the meantime, Pasadena focused on acquiring a supplemental water supply. Consequently, Metropolitan Water District of Southern California was established to build and operate a Colorado River aqueduct, although this water would not be available for at least a decade.
- California Division of Water Resources granted Pasadena permits to store and divert flood flows of the San Gabriel River and divert up to 4,000 AF of water per year.
- 1929 Pasadena voters approved a \$10 million bond issue to finance the construction of Morris Dam on the San Gabriel River and a conduit to the city.

1932 San Gabriel Valley Protective Association sued to prevent Pasadena from building the dam and diverting the water. MWD helped resolve the dispute by agreeing to purchase Morris Dam from Pasadena once Colorado River water became available.

1934 California Division of Water Resources published Bulletin 45, giving a full description of the basin's geology and storage characteristics. It was not until the early 1940s that users learned the basin had been in overdraft every year since 1913, and that the annual overdraft had averaged 7,000 acre feet, or roughly 33% of the average annual safe yield.

1935 Pasadena officials called together representatives of other known Raymond Basin producers, reviewed the published reports of DWR and attempted to negotiate a pumping reduction on a cooperative rather than an adversarial basis. These efforts failed and city officials contemplated legal action.

Pasadena officials had reached the limits of their willingness to act alone. The city reduced pumping somewhat when it began to receive additional supplies from the San Gabriel River. But in order to redress the overdraft on its own, Pasadena would have to cut its production by one-half and import the expensive Colorado River water when available, while other basin users continued to meet all their needs with groundwater. Pasadena was unwilling to do so.

1937 Pasadena chose instead to defend its right as a senior Raymond Basin appropriator. On September 23, 1937, Pasadena initiated proceedings in Superior Court against Alhambra and other major Raymond Basin water users. The action sought to adjudicate and quiet title to Pasadena's rights in the basin, and to enjoin the annual overdraft. The trial court required Pasadena to amend its complaint to name as defendants all entities in the basin pumping more than 100 acre feet annually. There were 30 defendants in all. The judge also ruled that the suit was not a simple action to quiet title but was a general adjudication of water rights in the basin.

City of Pasadena v City of Alhambra et al., was the first basinwide adjudication of groundwater rights in California and the first to use the Court Reference Procedure under the California Water Code. That procedure authorized the referral of cases involving the determination of water rights to the Division of Water Resources by the state Department of Public Works for investigation of the physical facts.

1939 20 parties were involved in the court reference procedure and petitioned

the court to refer the factual issues to DWR for investigation. The judge directed the referee to determine the “safe yield” of the basin and ascertain whether there was a surplus or an overdraft.

The investigation was expensive and time-consuming. Nevertheless, the referee's investigation avoided multiple concurrent investigations by several parties and provided the parties and court with a coherent, single view of the Raymond Basin and its problems.

1943

Referee's report filed in Raymond Basin litigation; this draft report described the basic geology of the Raymond Basin and specified the location of the Monk Hill Basin, and the Pasadena and Santa Anita subareas. The draft report stated the safe yield for Raymond Basin as a whole was 21,900 acre feet per year and recommended limiting withdrawals to the safe yield and using imported water to meet further demands.

As the referee's draft report circulated among the parties, most tried to work out a settlement. Litigation had changed the default condition of the negotiations. Before litigation, failure to negotiate a settlement simply continued the status quo--the pumping race. With litigation underway, if the parties failed to achieve a negotiated settlement, the case would go to trial and the court would decide the parties' water rights. Since Raymond Basin was the first groundwater basin to be adjudicated and California water rights law was very complex, the possible outcomes of a trial were highly uncertain. Waiting for the judge's decision was risky.

The parties had already spent four years and considerable sums of money on this dispute. A negotiated settlement offered the possibility of minimizing additional expenses. Negotiation was facilitated by the presence of shared counsel; one attorney was either counsel or special counsel for sixteen of the parties. This unusual communication link made it easier to reach a cooperative agreement.

Most parties agreed to appoint a committee of seven attorneys and engineers to work out a stipulated agreement that could be presented to the court. All but two parties agreed to the stipulation which provided:

- 1) Admission that taking of the water was adverse to the claims other parties, thus satisfying the requirements of a superior prescriptive right;
- 2) Allocation of the basin's safe yield among the parties;
- 3) Declaration and protection of each party's right to a specified proportion of the safe yield; and
- 4) Arrangement for the exchange of pumping rights among parties

- 1944 On April 5, 1944, Judge Collier designated the Division of Water Resources to serve as watermaster for the stipulation
- Judge Collier signed the judgment on December 23, 1944, adopting the stipulation worked out by the parties. By mid 1944, all of the parties except the California-Michigan Land and Water Company had agreed to the stipulation. His decision is known as "mutual prescription". The judge accepted the determination of a "present unadjusted right" defined as the highest amount of water continuously produced during a five-year period prior to the filing of the lawsuit. Each party owned this right by prescription, and the rights were of equal priority. The judge then defined a "decreed right" for each party which was that party's present unadjusted right adjusted downward about one-third so that the sum of all parties' decreed rights matched the estimated safe yield.
- The stipulation and judgment in *Pasadena v. Alhambra* completed the first phase of institution building in Raymond Basin. Water users had constituted a governance structure for the basin through the adjudication process. The stipulation and judgment also established a management program for the basin, within and subject to this basin governance system. The management program was a fairly simple fixed safe-yield operation. The provisions of the stipulation and judgment designated: (1) the set of authorized users of the basin and provided for their entry and exit; (2) assigned them rights to specific quantities of pumped water each year and provided for the exchange, lease or sale of those rights; and (3) limited them in the aggregate to the basin's estimated safe yield.
- 1945 California-Michigan Land and Water Company *appealed* the *Pasadena v. Alhambra* judgment and the basic governance structure and management program were quickly called into question. As the judge anticipated, his decision based on the stipulation's idea of mutual prescription was the basis for the California-Michigan Land and Water Company appeal
- 1947 In response to California-Michigan's appeal, the District Court of Appeal reverses and remands *Pasadena v. Alhambra*
- 1949 In response to an appeal filed to the District Court of Appeals decision, the California Supreme Court affirmed *Pasadena v. Alhambra* overturning the Court of Appeal and affirming the judge's original judgment. The Supreme Court also considered the interests of the various publics served by Raymond Basin water producers. Proportionate reduction by each producer would be less disruptive of the local water economy than the complete elimination of rights for some. Without explicitly endorsing the judge's mutual-prescription reasoning, the Supreme Court sustained his

result. This had the effect, intended or not, of adding a new doctrine to California water law.

Although a new doctrine had been added, the California law of water rights had not been overturned or revolutionized. *Pasadena v. Alhambra* had been decided and affirmed without overruling any previous water rights decisions. Mutual prescription was not substituted for the old scheme, but allowed to develop alongside it. *Pasadena v. Alhambra* provided an alternative capacity in which groundwater users could resolve overdraft problems. With the Supreme Court's approval of *Pasadena v. Alhambra*, a community of water users who had worked out their own settlement of an overdraft could approach a court with some assurance that the judge would recognize the settlement and place public authority behind it. *Pasadena v. Alhambra* allowed users of an overdrafted basin to constitute their own basin governance systems and management programs.

The advent of mutual prescription meant that pumpers in every nonadjudicated basin in the state faced the uncertain situation of not knowing when a basin could become overdrawn. Therefore, the decision in *Pasadena v. Alhambra* had the unintended effect of encouraging pumpers in other basins to increase pumping in order to enlarge and protect their right after a potential adjudication.

- 1950 City of Pasadena requested redetermination of Raymond Basin safe yield based on observed changes in basin conditions. The court granted the motion on November 17, 1950 and appointed DWR as referee to make the review.
- 1955 The DWR Report of Referee filed October 5, 1954 increased the estimated safe yield to a total of 30,622 acre feet. The Court issued a Modification of Judgment on April 29, 1955, increasing the decreed rights of the parties proportionally to a total of 30,622 acre feet, effective July 1, 1955.
- 1974 On January 17, 1974, the second modification of Raymond Basin Judgment was signed allowing parties credit for spreading of canyon diversions in spreading grounds in the vicinity of the Arroyo Seco, Eaton Wash, and Santa Anita Creek Canyon.

Source of above information: "Dividing the Waters" by William Blomquist

1984 On March 26, 1984, the third modification of Raymond Basin Judgment was approved, reconstituting the basin governance system by assigning watermaster responsibilities to Raymond Basin Management Board, successor to the Raymond Basin Advisory Board. The Board's authority to manage storage water in the basin ushered in the era of conjunctive use and provided the mechanism for local management of the groundwater resource while retaining the safe yield concept of the original adjudication.

1992-1993 On October 7, 1992 and March 10, 1993: Long Term Storage policies were adopted and Basin storage capacity determined and allocated to parties for their use; an important step in allowing all parties to benefit from the storage potential of the Basin

2001 In July of 2001, by way of a letter to the Chief Executive Officer of Metropolitan Water District, the Raymond Basin Board affirmed their support for conjunctive use in the Basin, once potential negative impacts are identified, evaluated, and resolved.

At the same meeting, the Board approved the proposed concept of the Foothill/Monk Hill Conjunctive Use Program under the following conditions:

- 1) Five Monk Hill producers that were also member agencies of Foothill Municipal Water District would participate.
- 2) Storage allotted to the program would be 7,500 acre feet, which was a number equal to 10% of the 75,000 acre feet of storage deemed at that time to be set aside for conjunctive use (CH2 M Hill determined that additional available storage in the Monk Hill was approximately 12,000 acre feet).
- 3) No imported MWD water could be used for injection unless the TDS is lower than 450 ppm.
- 4) Foothill and Monk Hill Producers submit the detailed final agreement terms with MWD for the program for Board evaluation and approval prior to issuing the final approval of the program.

2002 On July 10, 2002, the Board took action to conceptually approve the MWD Lead Agency Agreement to enable preparation of environmental documentation for the Pasadena portion of the Raymond Basin Conjunctive Use Program. Additionally, the Board appointed a steering committee to draft a request for proposal to perform a baseline study of the Basin. The study was intended to be used to evaluate the impacts of ongoing and future storage programs in the Basin.

On August 10, 2002, the Board approved the Lead Agency Agreement for

the Raymond Basin/MWD Conjunctive Use Program.

2003

The Board approved the proposed revised concept of the Foothill/Monk Hill Conjunctive Use Program under the following conditions:

- 1) Five Monk Hill producers that were also member agencies of Foothill Municipal Water District would participate and storage under the program.
- 2) Storage would be allotted equitably among those agencies.
- 3) Storage set aside for the program was increased from 7,500 acre feet to 9,000 acre feet with that amount being subtracted from the other conjunctive use program proposed by the City of Pasadena. This would leave 66,000 acre feet of storage for future consideration as part of the Pasadena Program.
- 4) No imported MWD water could be used for injection unless the TDS is lower than 450 ppm.
- 5) Extraction of project water would only occur after Metropolitan placed a call on this stored water as set forth by the guidelines within the final agreement.

The Board engaged Geoscience to prepare the Baseline Groundwater Assessment of the Raymond Basin which included a ground water flow model of the study area.

The City of Pasadena requested that the Pumping and Storage Committee review the applied calculation for spreading credits in the Arroyo and Milliard Canyons. The City requested that the variable calculation in use at the time be replaced with a straight 80% credit for water spread. After extensive review, the Committee recommended that staff use the 80% calculation as an interim method until the impact on water spread for general benefit could be evaluated. The Board approved this approach on July 9, 2003.

During the summer of 2003, an observation well (Bricker Well) used in calculating the City of Sierra Madre's Salvage Credit went completely dry. After inspection, it was determined that this condition was due to a combination of age and prolonged dry conditions in the Basin. In October of 2003 the Board made two determinations with regards to the Bricker Well: 1) Base calculations for Sierra Madre's Salvage Credit for that year on the assumption that there was zero outflow from the Basin. 2) Direct the City of Sierra Madre to construct a new observation well.

On December 8, 2003, Raymond Basin submitted its first application for \$30 million to the Corps of Engineers Section 219 Environmental Infrastructure Program for a raw water supply pipeline, recharge

enhancement and additional monitoring wells.

2004

Recognizing conditions highlighted by the ongoing Baseline Groundwater Assessment; the Board authorized staff to assemble a consulting team to seek Federal Grant funding to implement needed water resource enhancement projects for future supply reliability.

In February of 2004, the Baseline Groundwater Assessment of the Raymond Basin was completed. After initial review of the groundwater modeling for the Baseline Groundwater Assessment Geoscience was authorized to prepare partial tracking and capture zone modeling for the same scenarios used in the study. It was also determined that future additional modeling would be required to fully characterize contamination migration.

Baseline Assessment findings indicated that although proposed storage programs would have minimal impact on Basin water levels, the ability for the Basin to sustain production rates in the long-term may not be feasible without increased replenishment. The basin management strategies outlined in the assessment were used to develop projects and concepts meant to eventually stabilize groundwater levels in the Basin.

In July of 2004 the Board of Directors vote to accept a proposal by the Main San Gabriel Basin Watermaster to provide for administrative support. The Raymond Basin Management Board's offices officially move to Azusa, CA.

At their September 2004 strategic planning workshop the Board set a goal to obtain \$50 Million in outside funding in matching funds for much needed water resource projects in the Basin. After a series of meetings with other local basin managers and water agencies it is determined that a local coalition should be formed to seek Federal funding.

In October of 2004 Raymond Basin Staff and Board members began to actively participate in Regional Technical meetings hosted by the Main San Gabriel Basin Watermaster. These meetings were designed to identify regional water supply issues and possible solutions. The study area included Foothill and Valley Communities stretching from Rancho Cucamonga to La Canada/Flintridge.

Raymond Basin along with other water agencies and municipalities collaborate to develop water supply enhancement projects which are packaged together and called the Southern California Foothill

Communities Water Supply Reliability Program (WSRP).

Study projects include:

- 1) A 14 mile imported replenishment water pipeline from Azusa into the Raymond Basin eventually terminating in northern Pasadena.
- 2) An inter-connection from the Metropolitan Water District Foothill Feeder to the San Gabriel Valley Municipal Water District's (SGVMWD) pipeline in the San Dimas/La Verne area.
- 3) Emergency interconnections from the SGVMWD pipeline to the Water Facilities Authority, Three Valleys Municipal Water District and Inland Empire Utilities Agency treatment plants in the eastern San Gabriel Valley and Inland Empire.
- 4) The extension of the SGVMWD water delivery system south to the Alhambra, San Gabriel and Monterey Park area to mitigate groundwater production impacts in the area of the Main San Gabriel Basin commonly referred to as the Alhambra Pumping Hole.
- 5) An area-wide reconnaissance and feasibility study of natural groundwater recharge enhancement opportunities using new and existing facilities within the combined watersheds. The study area includes portions of the Raymond Basin, Main San Gabriel Basin, Six Basins and Chino Basin.

2005

January 12, 2005 Raymond Basin holds a community meeting for State and local elected officials to unveil the Southern California Foothill Communities Water Supply Reliability Program (WSRP).

February 2005 the Board is informed that the Foothill Conjunctive Use Program and City of Pasadena's storage proposal will not include a State Water Project Pipeline extension from the Glendale area. MWD also informs the Board that it will no longer be the lead agency for CEQA purposes on the 64,000 acre foot Pasadena Storage Program.

In October 2005, construction on the Chelsea Well (the Bricker Well replacement) is completed.

2006

Draft Supplemental Water Quality Criteria for Raymond Basin was published in March and distributed to the all parties to the judgment.

May 17, 2006, the MWD Board approved \$480,000 to reimburse the City of Pasadena for CEQA review and preliminary design work to develop a 66,000 acre foot storage program within the Raymond Basin.