

LEGAL PROBLEMS CAUSED BY THE NATURE OF THE VARIOUS  
WATER RIGHTS IN THE PECOS VALLEY

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The Roswell Artesian Basin is bounded on the north by a point approximately 25 miles north of the City of Roswell; on the west by the Sacramento Mountains; on the east by the Pecos River, and by the Seven-Rivers area on the south. The actual Basin boundaries extend much further than most of these points, but the area beyond these points is primarily recharge area and there is not much irrigation beyond the boundaries described.

There are two underground sources of water supply in the Roswell Basin---the artesian aquifer and the shallow water aquifer. The artesian aquifer is the deep water found in the San Andreas limestone formations. This limestone outcrops in the western and northern portions of the Basin and slopes generally in a southeasterly direction toward the Pecos River. This limestone formation is very porous and permits the water to move in a southeasterly direction. The recharge to the Artesian Basin comes from precipitation in the northern and western areas and also from stream flows which pass over the limestone which is exposed to the west. The movement of this recharge water builds up the artesian pressure causing wells which penetrate the artesian aquifer to flow and also causes upward percolation through faults in the formation. The source of recharge to the shallow water aquifer are:

1. Local precipitation,
2. Upward percolation from the artesian aquifer and through leaky artesian wells,
3. Return flow from irrigation, and in some cases, seepage loss from constructed works, and
4. Surface drainage.

The Roswell Basin is traversed from north to south by the Pecos River. Crossing the Basin from the west and moving toward the Pecos River are numerous streams among which are the Hondo River, North Spring River, South Spring River, Berrendo River, Felix River and Cottonwood Creek. There are also numerous draws which give surface drainage and which discharge into the Pecos River, or one of its tributaries. There are several drainage districts within the Roswell Basin which collect ground waters and drain the land. Running in a southerly direction is the Hagerman Canal which furnishes water for the irrigation of approximately 10,000 acres.

These various sources of water and their inter-relationship have created a great many legal and administrative problems.

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In its virgin state, the artesian pressure in the artesian aquifer was great and created many springs throughout the Basin. Many of these springs flowed in or near the various stream systems crossing the Basin. As the Artesian Basin was developed, it resulted in a reduced artesian pressure causing the spring flows to gradually decline, and in many instances, they ceased flowing, which resulted in a decreased stream flow.

The Shallow Water Basin maintained its equilibrium by discharging its surplus waters into the stream systems. When the Shallow Water Basin was developed, the lowering of the water table decreased the natural discharge into the stream system, and in some cases, the water table was drawn down to a point below the stream beds, which resulted in a reduction of the stream flow.

The Hagerman Canal is a constructed work for the purpose of carrying water for the irrigation of about 10,000 acres in the Pecos Valley. Its source of supply is from the stream flows and from artesian wells which either flow or pump into the canal system. The seepage losses from the canal and the return flow from the irrigation of lands from the canal raised the water table under the lands east of the canal. Drainage districts were formed to reclaim these lands and to use the waters for the irrigation of other lands. Some of the drainage district lines are open ditches and others are underground tile which collect the waters and discharge them into ditches which eventually discharge into the Pecos River. In some instances, water was pumped from these ditches for irrigation purposes or was discharged into the Pecos River where it was later recaptured and used for the irrigation of other lands downstream.

The 1931 Session of the Legislature enacted an Underground Water Code which gave to the State Engineer the jurisdiction over all underground supplies, the boundaries of which were reasonably ascertainable by scientific investigation. In 1931, the State Engineer declared the boundaries of the Roswell Artesian Basin and thereafter approved no applications for the appropriation of artesian waters from the Basin for the reason that all of the artesian waters had been fully appropriated at that time. The State Engineer did not feel that all of the waters of the Shallow Water Basin had been appropriated and applied to beneficial use. This source of supply was open to new appropriations or for the purpose of supplementing existing rights until August of 1937 when it too was closed to any further appropriations. The areas outside the boundaries of the Roswell Artesian Basin as declared by the State Engineer in 1931, were not under his jurisdiction or control. In these areas, it was not necessary to obtain a permit to drill wells or to appropriate the waters from either the shallow or artesian source. Continued development and expansion of the underground waters outside the original boundaries of the Roswell Artesian Basin resulted in the extension of these original boundaries to include all lands upon which it was felt that waters from the underground source could be applied to beneficial use.

All of the factors which I have enumerated created many administrative and legal problems in connection with the use of these waters, most of which problems remain unsolved to date. Some of these problems are:

1. What remedial rights do the owners of surface water rights from the streams have where the development of the artesian or shallow basin has reduced the stream flow to a point where their original rights can no longer be supplied from the stream?

One school of thought contends that an appropriative right from the stream system extends to and includes the waters of the shallow and artesian basins which was an original source of their supply. They contend that they should be permitted to drill wells in the Basin to supplement their present surface supply and to bring it back to the original quantity of water to which they are entitled under their permits and licenses.

The opposing school of thought contends that the surface and underground water sources are separate and distinct and that an appropriative right from a stream under the 1907 Surface Water Code does not grant or carry with it any rights to the use of an underground source of supply. They contend that the only way in which a person can acquire a right to the use of the underground waters of the State, is in accordance with the provisions and procedures set out in the 1931 Underground Water Code.

This opposing school also contends that the surface right owners are guilty of laches and are now estopped to claim any of the underground waters of the Roswell Artesian Basin. One argument along this line is to the effect that the Shallow Water Basin was open and subject to appropriation from 1931 to 1937. During this six-year period, all surface right owners could have applied for, and obtained a permit to appropriate the waters of the Shallow Basin to supplement their surface rights, and many surface right owners did so apply and obtain these supplemental rights. All of the artesian and shallow waters had been appropriated prior to 1937 and to now permit these surface right owners to drill supplemental wells and withdraw water from the underground source would impair the existing rights of all owners of rights within the Basin.

2. To what extent can the owners of drainage waters use the stream systems as carriers of such waters?

The owners of drain lines are permitted to discharge the drainage water into the stream systems and to recapture and take this water out of the stream system for the irrigation of lands downstream. They cannot use the stream system as a storage reservoir and claim the right to divert for irrigation purposes during the crop season the same quantity of water which they had discharged into the stream system during the year. An owner of drainage water cannot divert at a greater rate than his drainage line is then contributing to the stream system and this amount is decreased by such carriage loss as the State Engineer may set. This involves the measurement of the drainage line as it discharges into the stream, and further measurement where it is being diverted from the

stream for irrigation purposes.

3. Do the owners of drain lines have appropriative rights in the Shallowground Water Basin?

The drainage systems in most cases were originally constructed below the then water table level of the Shallow Basin. The waters collected by these drainage systems consist of:

- (a) Precipitation,
- (b) Return flow from irrigation,
- (c) Seepage loss from constructed works, and
- (d) Waters of the Shallow Basin which naturally discharged towards the Pecos River.

These are the same waters which make up the Shallowground Water Basin, and when comingled, they lose their identity and become a part of the Shallowground Water Basin and are subject to appropriation and application to beneficial use. These rights, in most cases, antedate the 1931 Underground Water Code and are vested rights. It must be remembered, however, that the right is vested for the method of diversion used at the time of the enactment of the 1931 Underground Water Code. These owners cannot change their method of diversion to wells and pumps if such change in method of diversion will impair existing rights.

4. What is the legal status of the water rights which were initiated in the extension areas of the Roswell Artesian Basin prior to being taken into the Basin?

When a new area is taken into the Roswell Artesian Basin, there are often wells being drilled at the time of the Order, or lands in the process of being broken out for the purpose of being irrigated from these wells or wells which were completed prior to the time the area was included in the Basin. It would appear that since no permit was required to drill these wells or to apply the water to beneficial use, that these inchoate rights should be treated the same as an applicant's right for a permit to drill a well and appropriate the waters for beneficial use. Under the existing regulations of the State Engineer, he would be given two years in which to complete the construction of his works and to apply the waters to beneficial use, and in the event that he had not completed these requirements within the two-year period, he would then, upon application, be granted an extension of time for an additional two-year period.

A problem arises when the individual completes his well and applies the water to beneficial use on more acreage than he could continue to cultivate from that well or wells, and he then applies to the State Engineer for a permit to drill a supplemental well for this acreage. It would appear that the applicant should not be permitted to secure a source of supply in excess of the initial production of the wells drilled prior to the time the area is taken into the Basin.

Much of the land in the extension areas is irrigated from wells drawing upon recharge rather than storage, and the water level in the area declines rapidly resulting in the pumping from an uneconomical depth. Applications to transfer these rights into the original Basin have been made. These applications have been protested by the Pecos Valley Artesian Conservancy District and the protest has been upheld by the State Engineer on the theory that all of the waters of the original Basin have been appropriated and any additional appropriations would impair all existing rights with the original Basin.

#### LEGAL ASPECTS OF WELL METERING IN THE PECOS VALLEY

The legality of metering all wells in the Roswell Artesian Basin involves the following statutes:

1. Sec. 75-2-9 provides, "that the State Engineer shall have the supervision of the apportionment of water in this State according to the licenses issued by him and his predecessors and the adjudications of the Courts".
2. Sec. 75-11-18 provides, "that all underground waters of the State of New Mexico are hereby declared to be public waters and belong to the public of the State of New Mexico and to be subject to appropriation for beneficial use within the State of New Mexico. All existing rights to the beneficial use of such waters are hereby recognized".
3. Sec. 75-11-4 provides, "Existing water rights based upon application to beneficial use are hereby recognized. Nothing herein contained is intended to impair the same or disturb the priorities thereof".

All artesian rights in the Roswell Artesian Basin were perfected prior to the enactment of the 1931 Underground Water Code and many of the shallow rights were perfected prior to that date. It is my opinion that the State Engineer does not have the supervision of the apportionment of these underground water rights since they are not, in most cases, licensed rights, nor have they been adjudicated by the Courts and the foregoing statutes provide that these rights are recognized and nothing in the statutes shall impair them.

All underground water rights from the Roswell Artesian Basin are in the process of being adjudicated and when the adjudication order is signed, these rights will be subject to the supervision of the apportionment of the water according to the adjudication order.