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ADVANCE SHEET HEADNOTE  
December 19, 2011

**No. 10SA224 - In re Subdistrict No. 1 - § 37-92-501, C.R.S. (2011) - § 37-48-126, C.R.S. (2011) - § 37-48-108, C.R.S. (2011) - § 37-92-304, C.R.S. (2011) - Approval of Ground Water Management Plans - Subdistrict Official Plans - Plans of Water Management - Water Division No. 3 - San Luis Valley - Rio Grande Water Conservation District - Role of State Engineer and Trial Court - Plan as Decreed Sufficient to Address Prevention of Injury to Senior Surface Water Rights - Augmentation Plan Statutory Criteria Not Applicable to Plan Approval - Annual Replacement Plan Prevention of Injury - Burden of Going Forward and Burden of Proof Upon Subdistrict**

The supreme court affirms the judgment and decree of the Alamosa County District Court and the water court for Water Division No. 3 ("trial court") approving the official plan and ground water management plan adopted by the Special Improvement District No. 1 ("Subdistrict"), the Rio Grande Water Conservation District, and the State Engineer.

The General Assembly has adopted a series of statutes applicable to confined and unconfined aquifers within the San Luis Valley and Water Division No. 3, empowering the Subdistrict to adopt and implement the Plan. The Plan as approved and decreed adequately addresses the replacement of well depletions that injure adjudicated senior surface water rights, along with

restoring and maintaining sustainable aquifer levels in accordance with the applicable statutes. Provisions of the augmentation statutes do not govern approval of the Plan. The Subdistrict bears the burden of going forward and the burden of proof to demonstrate that annual replacement plans prevent material injury to adjudicated senior surface water rights caused by ongoing and past well depletions that have future impact.

SUPREME COURT, STATE OF COLORADO  
101 West Colfax Avenue, Suite 800  
Denver, Colorado 80202

Case No. 10SA224

Appeal from the District Court  
Water Division 3, Case No. 07CW52  
Alamosa County District Court, Case No. 06CV64  
Honorable O. John Kuenhold, Judge

Concerning the Office of the State Engineer's Approval of the Plan of Water Management for Special Improvement District No. 1 of the Rio Grande Water Conservation District.

**Appellants:**

San Antonio, Los Pinos and Conejos River Acequia Preservation Association; Save Our Senior Water Rights, LLC.; Richard H. Ramstetter; and Peter D. Atkins;

v.

**Appellees:**

Special Improvement District No. 1 of the Rio Grande Water Conservation District; Rio Grande Water Conservation District; Dick Wolfe, State Engineer; Rio Grande Water Users Association; Conejos Water Conservancy District; Farming Technology Corporation; Mountain Coast Enterprises, LLC; Ernest M. Myers; Virginia K. Myers; Nevitt Farms; Sam Investments, Inc.; Skyview Cooling Company, Inc.; Wijaya Colorado, LLC; Edward L. Harmon; Sharilyn R. Harmon; Cristi Lewis; David W. Bradley; Costilla Ditch Company; Perry Alspaugh; Martin Shellabarger; Kelly Sowards; Robert Adkins; Mario Bassi; Obbie Dickey; V. W. Ellithorpe; Kari King; Laurie S. Lovato; Timothy N. Lovato; Laurie McClung; Ed Nielson; Janis N. Slade; Norman W. Slade; and C. R. Tomlin;

and

**Appellee Pursuant to C.A.R. 1(e):**

Craig Cotten, Division Engineer, Water Division 3.

\* \* \* \* \*

**Petitioners-Appellees:**

Rio Grande Water Conservation District; Craig Cotten, in his capacity as Division Engineer for Water Division 3; Farming Technology Corporation; Mountain Coast Enterprises, LLC; Virginia Myers; Sam Investments, Inc.; Skyview Cooling Company, Inc.; Wijaya Colorado, LLC; Edward Harmon; Sherilyn Harmon; Jason Benton; Richard Benton; Clayton Corzine; Thomas Corzine; Roy McConnel; Off Ranches, Inc.; Frederick Paulson, II; Frederick Paulson, V; V. W. Ellithorpe; Norman Slade; and Nevitt Farms;

v.

**Appellants:**

San Antonio, Los Pinos and Conejos River Acequia Preservation Association; Save our Senior Water Rights, LLC; Richard Ramstetter; and Peter Atkins.

JUDGMENT AFFIRMED  
EN BANC  
December 19, 2011

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JUSTICE HOBBS delivered the Opinion of the Court.

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**Introduction and Holding**

This appeal is from a judgment and decree of the District Court for Water Division 3 (“water court”) and the Alamosa County District Court in two consolidated cases tried before Judge John Kuenhold, Chief Judge and Water Judge (“trial court”). In combination, these two cases involve an amended plan for water management (“Plan”) adopted by Special Improvement District No. 1 of the Rio Grande Water Conservation District (“Subdistrict”).

The Plan as decreed is the product of an iterative public process of adoption, review, revision, and approval by the Rio Grande Water Conservation District ("District"), the Subdistrict, the State Engineer and the trial court. The District and any of its subdistricts are political subdivisions of the state created by statute to carry out water planning and management functions within the San Luis Valley.

Section 37-48-101, C.R.S (2011), the legislative declaration to the Rio Grande Water Conservation District Act, states its purpose, in part, to be

the conservation of the water of the Rio Grande and its tributaries for beneficial use and the construction of reservoirs, ditches, and works for . . . the growth and development of the entire area and the welfare of all its inhabitants and . . . to safeguard for Colorado all waters to which the state of Colorado is equitably entitled.

The Subdistrict's Plan implements both longstanding statutory provisions for management of the ground and surface water resources of the Rio Grande Basin within Colorado's San Luis Valley, such as sections 37-48-108, -123 and -126, C.R.S. (2011), of the Rio Grande Water Conservation District Act, and statutes enacted in the first decade of the twenty-first century, in particular section 37-92-501(4), C.R.S. (2011), of the Water Right Determination and Administration Act. These and ancillary statutory provisions introduce into Colorado water law a basin-specific mechanism for optimizing the conjunctive use of

tributary groundwater and surface water within Water Division No. 3, the use of which is subject to the Rio Grande Compact under section 37-66-101, C.R.S. (2011).

As summarized in section 37-92-501(4), the General Assembly's purpose is to maintain a "sustainable water supply" in the confined and unconfined aquifers underlying the San Luis Valley, while permitting "the continued use of underground water consistent with preventing material injury to senior surface water rights" and consistent with the state's obligations under the Rio Grande Compact. Subdistrict No. 1's Plan may be the predecessor to like plans which, in conjunction with State Engineer rules, will comprise a comprehensive water management framework for Water Division No. 3.

Objectors-appellants San Antonio, Los Pinos and Conejos River Acequia Preservation Association; Save Our Senior Water Rights, LLC; Richard Ramstetter; and Peter Atkins (collectively, "Objectors") challenge the Plan.<sup>1</sup> Issues they raise center on

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<sup>1</sup> Appellants frame the issues on appeal as follows:

Whether the District Court for the 12th Judicial District and Water Division 3 ("trial court") erred in adopting and approving a plan of water management including ground water management plan for the Special Improvement District No. 1 of the Rio Grande Water Conservation District ("Subdistrict") which violates Colorado law regarding:

1. The trial court's failure to find and determine that under the terms of the Subdistrict Plan no material injury to vested water rights will result;



alleged trial court failures to abide by Colorado statutory and case law applicable to augmentation plans. However, the General Assembly has plainly established criteria for approval and decree of the Subdistrict's Plan that differ from those applicable under the augmentation plan statutes.

We hold that Subdistrict No. 1's Plan as decreed complies with the special statutory provisions applicable to its

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2. The trial court's violation of Colorado law by re-writing the Subdistrict Plan;
  3. The trial court's delegation to the State Engineer the power to annually determine and approve the terms and conditions on which the Subdistrict Plan will operate, including the sources and amounts of replacement water;
  4. The trial court's modification of the burden of proof for review of actions of the Subdistrict and the State Engineer;
  5. The Court's Plan's use of the water rights attributable to the Recharge Decrees;
  6. The Court Plan purporting to authorize the Subdistrict to deprive the property rights of water users;
  7. The failure to require in the Court Plan legally available replacement water to replace all out-of-priority depletions to prevent material injury to senior water rights;
  8. The authorization for the Subdistrict to contract the owners of non-Subdistrict Wells to replace their out-of-priority depletions, but without specific terms and conditions in the Court Plan for determining depletions and replacing the depletions in time, location and amount and thereby unlawfully expanding and amending the Court Plan;
  9. The authorization in the Court Plan to use water consumed by phreatophytes as a credit to reduce calculated stream depletions and increase the quantity of water that may be pumped from the aquifers by the wells; and
  10. The use of retained jurisdiction in the Court Plan as a substitute for a finding of no material injury and as a substitute for specific terms and conditions.

development and implementation. Accordingly, we affirm the trial court's judgment and decree.

**I.  
Facts**

In Simpson v. Cotton Creek Circles, LLC, 181 P.3d 252 (Colo. 2008), we addressed and affirmed State Engineer rules regarding new withdrawals from the confined aquifer. In doing so, we discussed the hydrogeology of the San Luis Valley, the Rio Grande Compact, evolving steps taken by the State Engineer to study, propose, and adopt rules for administration of surface and groundwater rights in Water Division No. 3, the General Assembly's enactment of legislation for development of the Rio Grande Decision Support System, and the State Engineer's development of a computerized groundwater model (the RGDSS model) to simulate groundwater and surface water interaction.

The San Luis Valley lies between two mountain ranges in south-central Colorado.<sup>2</sup> Stretching around ninety miles from

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<sup>2</sup> Historians recognize early settlements in the San Luis Valley as the oldest permanently inhabited villages in our state. Carl Abbot, Stephen Leonard & David McComb, Colorado: A History of the Centennial State 41 (3d ed. 1994). San Luis is often recognized as the first permanent town in the state. Id. The town of Garcia, near the New Mexico border on Costilla Creek, also claims to be the oldest in the state. See Virginia McConnell Simmons, The San Luis Valley: Land of the Six-Armed Cross 84 (2d ed. 1999). Numerous other small towns were settled around the edges of the valley in the 1850s and 1860s by people of Hispanic and Native American heritage coming north from New Mexico. Id. at 77. Anglos joined in settling the valley in the

north to south and fifty miles at its greatest width, the valley is bordered on the east by the jagged and dramatic Sangre de Cristo Mountains, rising to over 14,000 feet, and on the west by the San Juan, Saguache, Conejos, and La Garita ranges. The remarkably level valley floor sits at an elevation ranging between 7500 and 8000 feet and receives an average of 7.5 inches of precipitation per year. See Cotton Creek Circles, 181 P.3d at 255. The stream system has been over-appropriated since the early 1900s, used primarily for irrigation.

Consistent with the Rio Grande Compact, the State Engineer administers the Rio Grande and Conejos rivers based on annual projected runoff and other criteria related to the apportionment of the interstate stream among Colorado, New Mexico and Texas. See generally William A. Paddock, The Rio Grande Compact of 1938, 5 U. Denv. Water L. Rev. 1 (2001); Colo. Found. for Water Educ., Citizen's Guide to Colorado's Interstate Compacts (2010). In 1972, the State Engineer issued a moratorium on new well permits drawing from the confined and unconfined aquifers

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1860s and the population reached 4,000 by 1870. Abbott, Leonard & McComb, supra, at 42.

More than forty ditches dug to serve these early settlements have decreed appropriation dates earlier than any other water rights elsewhere in the state. LeRoy R. Hafen & Ann W. Hafen, Colorado: A Story of the State and Its People 129 (1947). A historic marker just south of San Luis proclaims the San Luis People's Ditch, a community acequia near the town of San Luis with an 1852 priority date, to be Priority No. 1 in our state.

outside the Closed Basin.<sup>3</sup> A moratorium on confined aquifer wells in the Closed Basin followed in 1981. Cotton Creek Circles, 181 P.3d at 255.

In Alamosa-La Jara Water Users Protection Ass'n v. Gould, we remanded the State Engineer's proposed 1975 rules for Water Division No. 3 for further development, identifying optimum use as the guiding principle for water management. 674 P.2d 914, 935 (Colo. 1983); see also Santa Fe Trail Ranches Prop. Owners Ass'n v. Simpson, 990 P.2d 46, 54 (Colo. 1999) (stating that prior appropriation water law fosters optimum use, efficient water management and priority administration). Since our remand for further rulemaking, the General Assembly has undertaken to adopt substantial statutory oversight over water management in the San Luis Valley.

Severe drought in the late twentieth and early twenty-first centuries has led to substantial curtailment of surface water use, large aquifer depletions particularly in the Closed Basin, and the need to manage wells to safeguard sustainable amounts of groundwater and prevent injury to adjudicated surface water

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<sup>3</sup> The Closed Basin is defined in the Rio Grande Compact as "that part of the Rio Grande basin in Colorado where the streams drain into the San Luis lakes and adjacent territory and do not normally contribute to the flow of the Rio Grande." Rio Grande Compact, art. I(d) (codified at § 37-66-101). As recognized by several water court decrees, there existed at one time a "hydraulic divide" between the unconfined aquifer tributary to the Rio Grande and the unconfined aquifer primarily tributary to the Closed Basin.

rights. Accordingly, the process for developing rules has included the enactment of new statutory provisions for water management in the San Luis Valley. In 1998, the General Assembly adopted HB 98-1011, in part to address the lack of collective knowledge about the valley's aquifers and their connection to the surface streams. See Ch. 231, secs. 1-2, §§ 37-90-102, -137, 1998 Colo. Sess. Laws. 852, 852-53.

Pursuant to this directive, the State Engineer and the Colorado Water Conservation Board initiated the Rio Grande Decision Support System (RGDSS, pronounced "RIG-dis") study.<sup>4</sup> RGDSS is based on the widely accepted MODFLOW model designed to simulate the occurrence and movement of groundwater.<sup>5</sup> Using a central database of observed climatological, hydrological, and agricultural data, RGDSS models and projects the movement of

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<sup>4</sup> For more information and ongoing updates of RGDSS, see Rio Grande River Basin, Colorado's Decision Support Systems, Colo. Water Conservation Bd., <http://cdss.state.co.us/basins/Pages/RioGrande.aspx> (last visited Dec. 9, 2011). RGDSS is the effort of numerous engineering contractors working with the State Engineer and the Colorado Water Conservation Board. As we noted in Cotton Creek Circles, the water court calls the study "one of the most comprehensive studies of the Valley's geology and hydrology that has ever been undertaken." 181 P.3d at 257.

<sup>5</sup> MODFLOW stands for "modular three-dimensional finite-difference groundwater model" and it was first developed by the United States Geological Survey in 1984. See MODFLOW and Related Programs, U.S. Geological Survey, <http://water.usgs.gov/nrp/gwsoftware/modflow.html> (last visited Dec. 9, 2011).

groundwater between aquifers, water consumption, and the effect of groundwater withdrawals on surface water.

The significant drought of the early twenty-first century increased the urgency for a sustainable water supply solution. In 2004, the General Assembly adopted SB 04-222, providing yet more guidance to the State Engineer in drafting rules for Division 3 underground water use. See Ch. 235, sec. 1, 2004 Colo. Sess. Laws 777 (codified at § 37-92-501(4)). The Plan now before us represents the first attempt by water users in the San Luis Valley to regulate groundwater use in compliance with an interlinked set of statutory provisions designed to achieve sustainable aquifer levels while preventing injury to adjudicated senior surface rights.

Pursuant to section 37-48-123, a majority of landowners owning a majority of the land within the proposed Subdistrict boundaries petitioned the District board of directors to establish the Subdistrict. The District submitted the petition to the Alamosa County District Court, which approved the creation of the Subdistrict in July 2006 in case no. 2006CV64, retaining jurisdiction over matters involving the Subdistrict under section 37-48-124(2), C.R.S. (2011).

Lands included within Subdistrict boundaries are within the Closed Basin of the San Luis Valley, north of the Rio Grande. See Appendix. The Subdistrict includes around 174,000 irrigated

acres that rely primarily on groundwater wells for water supply. Around 3000 Subdistrict irrigation wells pump water from the aquifers underlying Subdistrict lands, with around 300 pumping from the confined aquifer and the balance from the unconfined aquifer. Irrigation wells used by Subdistrict members date from the late nineteenth century to the State Engineer's 1981 moratorium.

The Subdistrict's board of managers drafted an official plan that contained a ground water management plan. As required by section 37-48-126(2), the Plan obtained the approval of the State Engineer, who filed a notice of approval with the water court and initiated case no. 2007CW52. After a public hearing on the Plan in October 2007, the District board of directors and the Subdistrict board of managers formally adopted the Plan as the official plan of water management for the Subdistrict.

Pursuant to section 37-48-126(3)(b), several parties objected to the board of directors' approval of the Subdistrict Plan before the district court in case no. 2006CV64. In accordance with section 37-92-501, several parties also objected to the State Engineer's approval of the Subdistrict Plan before the water court in case no. 2007CW52. Because the Subdistrict's official plan included a ground water management plan, the trial court exercised its discretion under section 37-48-126(3)(b) to consolidate the cases regarding objections to both the Plan's

approval by the District board of directors and its approval by the State Engineer.

The trial court eventually held two trials. A seven-day trial on the objections led to the first Findings of Fact, Conclusions of Law and Order, entered on February 18, 2009. In that order, the trial court determined the Plan to be "conceptually compatible" with the legal requirements of ground water management plans and the intent of the legislature in enacting SB 04-222. Among a series of findings, it found that (1) the Plan properly sought to stabilize the storage level of the unconfined aquifer at a "sustainable" level of 200,000 to 400,000 acre-feet less than the aquifer's 1976 level, and (2) the strategies proposed to meet that goal -- fallowing up to 40,000 acres of previously irrigated land and restoring and maintaining a hydraulic divide between the Rio Grande and the Closed Basin -- were reasonable and supported by the evidence.

However, the trial court rejected and sent back the Plan to the Subdistrict board of managers and District board of directors for "further consideration and amendment because it lacks detail, grants discretion with no guidance, fails to acknowledge the replacement of injurious depletions as a priority, and simply is not a 'comprehensive and detailed plan'" as required by section 37-48-126.



The trial court advised the Subdistrict to include in an amended Plan:

(1) the timeframe and the methodology to be used to determine the depletions calculated to occur to the Rio Grande and its tributaries resulting from the operation of Subdistrict Wells; (2) a procedural timeframe for disclosure of the methodology for replacement of the depletions to the Rio Grande and its tributaries resulting from the operation of Subdistrict Wells; (3) a timeframe for annual review and calculations regarding the past irrigation season and procedures for addressing under or over-delivery; (4) a template for the annual operating plan which should contain the specific information concerning the operation of the plan in a coming year; and (5) provisions for review of the operation of the plan at the end of the year.

(Internal quotation marks omitted).

Citing section 37-48-126(3)(b), the court referred the Plan back to the District and Subdistrict to remedy deficiencies. In response, through a public process, the Subdistrict developed five detailed appendices for the Plan. In May 2009, the State Engineer approved the amended Plan as meeting the requirements of section 37-92-501(4)(a) and (b), and published notice. After a public hearing in June 2009, the District adopted the amended Plan as the official plan of the Subdistrict under section 37-48-126(3)(a), and published notice.

Objectors filed timely objections to both the State Engineer's and the District's approval of the amended Plan, and the court set the consolidated cases for a second trial. In a June 2009 case management order, the water court held that the

Objectors could only challenge amendments made after the October 2008 trial and could not re-litigate issues determined in the February 2009 order. Trial on the amended Plan began on September 28, 2009 and continued for ten days. The second trial primarily concerned whether the amended Plan sufficiently protects senior surface water rights.

In its May 27, 2010 Findings of Fact, Conclusions of Law, Judgment and Decree, the trial court found that the amended Plan, together with decree conditions included as part of its judgment, provides a satisfactory methodology and procedure for determining injurious depletions from well pumping within the Subdistrict, acquiring replacement water, and operating an annual replacement plan for protecting against injury to adjudicated senior surface rights.

The trial court delved deeply into the amended Plan's ability to address injury to senior surface rights. The crucial calculations in the plan are the RGDSS-dependent projections of lagged impacts to surface streams from Subdistrict groundwater pumping. The trial court held that, although the RGDSS model has inherent limitations in determining stream impacts caused by groundwater pumping, the most updated version -- the RGDSS groundwater model Phase 5 and response functions developed in connection therewith -- constitutes the best available tool to determine the timing, amount, and location of depletions to

surface streams from Subdistrict well pumping. The court found that using RGDSS to calculate the Subdistrict's net groundwater consumption accurately and reasonably calculates the out-of-priority diversions by Subdistrict wells that may cause material injury to surface rights and must be replaced.

The court found and ruled that the amended Plan, in order to meet the requirements of section 37-92-501(4) (a) and (b), must be accompanied by decree conditions that primarily address the replacement of injurious stream depletions resulting from ongoing and past Subdistrict well pumping that will have future impact. See Well Augmentation Subdistrict v. City of Aurora, 221 P.3d 399, 413 (Colo. 2009).

Construing the statutory criteria for subdistrict water management plans in Water Division No. 3, the court determined that it need not make the threshold no-injury finding contained in the augmentation plan statutes. Instead, the court found, the General Assembly intended that an approved, decreed, and implemented subdistrict plan with a ground water management component would operate as an alternative means for protecting against injury to adjudicated senior water rights. The water court retained jurisdiction to ensure the Plan is operated, and injury is prevented, through the means of an annual replacement plan, in conformity with the terms of the court's decree. The State Engineer approved the Plan with the inclusion of the trial

court's decree conditions. The Subdistrict does not contest the trial court's judgment and decree with the added conditions.

The Objectors challenge the trial court's judgment and decree on a number of grounds. We agree with the trial court that the Plan meets the criteria of the applicable statutory provisions governing its adoption.

## **II. Holding**

We hold that Subdistrict No. 1's Plan as decreed complies with the special statutory provisions applicable to its development and implementation. Accordingly, we affirm the trial court's judgment and decree.

### **A. Standard of Review**

We review de novo the water court's conclusions of law. S. Ute Tribe v. King Consol. Ditch Co., 250 P.3d 1226, 1232 (Colo. 2011). We will not set aside the water court's factual findings unless they are "so clearly erroneous as to find no support in the record." Id. We interpret statutes de novo. Id. Our duty in interpreting any statute is to effectuate the General Assembly's intent in enacting it. Id. We look first to the text of a statute and apply its plain meaning; we give effect to each word and provision of the statute, construing applicable provisions in harmony with the overall statutory design, whenever possible. Id.

**B.**  
**Constitutional and Statutory Prior Appropriation Setting**

In construing statutory provisions applicable to adjudication and administration of Colorado's prior appropriation system established pursuant to article XVI, sections 5, 6 and 7 of the Colorado Constitution, we are cognizant of three fundamental principles:

(1) that waters of the natural stream, including surface water and groundwater tributary thereto, are a public resource subject to the establishment of public agency or private use rights in unappropriated water for beneficial purposes; (2) that water courts adjudicate the water rights and their priorities; and (3) that the State Engineer, Division Engineers, and Water Commissioners administer the waters of the natural stream in accordance with the judicial decrees and statutory provisions governing administration.

Empire Lodge Homeowners' Ass'n v. Moyer, 39 P.3d 1139, 1147 (Colo. 2001).

When there is an insufficient supply of water to satisfy all water right uses, the General Assembly, consistent with Colorado's prior appropriation constitutional provisions, has charged the State Engineer with curtailing the undecreed uses and decreed junior rights in favor of decreed senior rights. Id. at 1149; see § 37-92-501(1), C.R.S. (2011) ("The state engineer and the division engineers shall administer, distribute, and regulate the waters of the state in accordance with the constitution of the state of Colorado . . . .").

By the 1960s there was growing conflict between surface water and groundwater users due to the hydraulic connection between the pumping of largely undecreed groundwater wells and the declining levels of surface flow in rivers such as the Rio Grande. See Cotton Creek Circles, 181 P.3d at 255 (noting that by 1958, there were already 7500 flowing wells in the San Luis Valley); Alamosa-La Jara, 674 P.2d at 918 (discussing the history of well construction and the State Engineer's decision to cease issuing permits for new wells due to the connection between the aquifer and the surface flow of the Rio Grande).

In response to this conflict, the General Assembly in 1965 enacted the Groundwater Management Act, which provided that the State Engineer was to administer both the surface water and groundwater in accordance with the priority system. Ch. 318, secs. 1-2, § 148-11-22, 1965 Colo. Sess. Laws 1244. In determining the validity of the 1965 Act, we recognized that implicit in the constitutional provisions concerning prior appropriation and vested rights was a requirement of maximum utilization of both the surface and subsurface waters of the state. Fellhauer v. People, 167 Colo. 320, 336, 447 P.2d 986, 994 (1968). We also recognized the necessity for constitutional integration of the maximum utilization and vested rights doctrines. Id.

In response, the General Assembly enacted the Water Right Determination and Administration Act of 1969. Ch. 373, sec. 1, §§ 148-21-1 to -45, 1969 Colo. Sess. Laws 1200, 1200-19 (codified as amended at §§ 37-92-101 to -602, C.R.S. (2011)). The 1969 Act established Colorado's current water law administrative scheme, including its system of water divisions and courts. Id. §§ 148-21-8 to -11, at 1202-05; see generally Colo. Found. for Water Educ., Citizen's Guide to Colorado Water Law (3d ed. 2009). Under its stated policy of conjunctive use, the 1969 Act required integration of groundwater wells into the priority system. Simpson v. Bijou Irrigation Co., 69 P.3d 50, 60 (Colo. 2003); see also § 148-21-2(2), 1969 Colo. Sess. Laws at 1200-01. The Act allowed unadjudicated wells in existence prior to 1969 to continue pumping in accordance with their original appropriation dates, so long as they filed an application for adjudication of their priorities by 1971. Simpson v. Bijou, 69 P.3d at 60; see also § 148-21-22, 1969 Colo. Sess. Laws. at 1212. As amended, the Act provides that State Engineer rules and regulations shall have as their objective the optimum use of water consistent with preservation of the priority system of water rights. § 37-92-501(2)(e).

The 1969 Act introduced into Colorado water law the augmentation plan statutory provisions as a device to allow diversion of ground or surface water out-of-priority while

ensuring the protection of adjudicated senior water rights. Empire Lodge, 39 P.3d at 1150. An applicant for an augmentation plan must receive judicial approval for the plan. § 37-92-302(1)(a), C.R.S. (2011). In such a proceeding, the applicant has “the burden of showing absence of any injurious effect.” § 37-92-304(3), C.R.S. (2011). When confronted with evidence of injury, the applicant must prove non-injury by a preponderance of the evidence. City of Aurora ex rel. Util. Enter. v. Colo. State Eng’r, 105 P.3d 595, 616 (Colo. 2005); Farmers Reservoir & Irrigation Co. v. Consol. Mut. Water Co., 33 P.3d 799, 811-12 (2001).

The inherently fact-specific determination of non-injury occurs during trial based on reliable evidence of the quantity, time, location, and quality of depletions and the legal availability of replacement water. City of Aurora, 105 P.3d at 616. To establish that an augmentation plan does not result in injury, “[t]he applicant’s evidence must be sufficient to enable the water court to consider the amount and timing of the applicant’s depletions, the amount and timing of legally-available replacement water, and lack of injury to vested appropriations.” Buffalo Park Dev. Co. v. Mountain Mut. Reservoir Co., 195 P.3d 674, 684 (Colo. 2008). The applicant must identify the source of legally available replacement water. Id.



In City of Aurora, the water court held that the applicant's proffered groundwater model was insufficiently reliable to predict the timing, amount, and location of either depletions or replacement water. 105 P.3d at 613. We affirmed, holding that the court's exclusion of that model from evidence at trial was not manifestly erroneous. Id. We derived these requirements of specificity in an augmentation plan from the statute detailing the proper standard of review in that context. In Buffalo Park, for example, we quoted at length from section 37-92-305(3)(a), (5), and (8), C.R.S. (2011). 195 P.3d at 684. We determined that repeated statutory emphasis on quantity and timing of depletions, proposed uses, and replacement water required the applicant to prove these prospective quantities, locations, and timings with sufficient specificity to allow the court to determine non-injury. Id.; see § 37-92-305(8). While non-injury was the constitutional and legislative motivation behind this scrutiny, we based the method of the scrutiny -- specific, reliable projections of quantities, locations, and timings of water movements -- on provisions of the statute. Buffalo Park, 195 P.3d at 684.

But, augmentation plan applications to the water court need not be the sole device for authorizing out-of-priority diversions by providing a supply of adequate replacement water to the stream for the prevention of material injury to

adjudicated senior rights. In Empire Lodge, we recognized the authority of the General Assembly to enact statutes addressing other means for prevention of material injury, thereby obviating the necessity of State Engineer curtailment orders. 39 P.3d at 1153 n.17.

**C.**  
**Statutory Criteria for Subdistrict Plan Approval**

The General Assembly has enacted such alternative means for the management of surface water and tributary groundwater in the San Luis Valley. The applicable statutory criteria require the trial court and us to review whether a water management plan is sufficiently comprehensive and designed to prevent material injury to adjudicated senior surface rights. A classic form of injury involves diminution of the available water supply that a water rights holder would otherwise enjoy at the time and place and in the amount of demand for beneficial use under the holder's decreed water right operating in priority. Farmers Reservoir & Irrigation Co., 33 P.3d at 807.

In 1967, the General Assembly created the Rio Grande Water Conservation District to promote the conservation, use, and development of the water resources of the Rio Grande and its tributaries. Ch. 329, sec. 1, § 150-10-1, 1967 Colo. Sess. Laws 664, 664 (re-codified at § 37-48-101, C.R.S. (2011)). That same act also provided for the creation of subdistricts, whose

purpose is to "help promote the local interests or accomplish improvements for any part of [the] district." § 37-48-108(1); see Ch. 329, sec. 1, § 150-10-8, 1967 Colo. Sess. Laws at 667.

When a subdistrict is created, the District board of directors is obligated to

prepare and adopt as the official plans for [the] subdistrict a comprehensive detailed plan, setting forth any plan of water management for the subdistrict, any improvements or works, including all canals, reservoirs, and ditches . . . and the manner of utilization of the same in any plan of augmentation or plan of water management . . . .

§ 37-48-126(1). A "plan of water management" in turn is defined as

a cooperative plan for the utilization of water and water diversion, storage, and use facilities in any lawful manner, so as to assure the protection of existing water rights and promote the optimum and sustainable beneficial use of the water resources available for use within a district or a subdistrict, and may include development and implementation of plans of augmentation and exchanges of water and ground water management plans under section 37-92-501(4)(c).

§ 37-48-108(4) (emphasis added). Thus, a plan may, but need not, include a plan for augmentation. In order to fund such plans of water management (or other improvements contained in the official plan), the subdistrict -- a political subdivision of the state -- is empowered to fix and collect rents, rates, fees, and tolls from any owner or occupant of real property that

is connected with, served by, or benefitted by the improvements or water management plan. § 37-48-189(1)(a)-(b), C.R.S. (2011).

The subdistrict must hold a public hearing on a proposed official plan before adopting it, and objectors to the plan must file their objections before the court that handled the case "establishing the district." § 37-48-126(3). If the official plan for the subdistrict contains a ground water management plan within the meaning of section 37-92-501(4)(c), the State Engineer must approve the ground water management plan before the subdistrict holds its public hearing on the official plan. § 37-48-126(2).

**1. State Engineer**

Pursuant to section 37-92-501(1), the State Engineer has jurisdiction to administer, distribute, and regulate Colorado's waters and may also promulgate rules and regulations to assist in these duties. The authorizing statute lays out several principles to guide the Engineer in the adoption of such rules, including:

Recognition that each water basin is a separate entity . . . [c]onsideration of all the particular qualities and conditions of the aquifer . . . [c]onsideration of relative priorities and quantities of all water rights . . . [and] [t]hat all rules and regulations shall have as their objective the optimum use of water consistent with the preservation of the priority system of water rights . . . .

§ 37-92-501(2)(a)-(e).

In 2004, the General Assembly amended section 37-92-501 to add subsection (4), a provision specific to the State Engineer's administration of groundwater use in Water Division No. 3. See Ch. 235, sec. 1, 2004 Colo. Sess. Laws 777 (SB 04-222). The General Assembly added subsection 4 to recognize Division 3's history of conjunctive use of groundwater and surface water, the unique geologic conditions underlying the Rio Grande watershed, Colorado's annual delivery obligations under the Rio Grande Compact, and the Division's consequent need for greater flexibility in water management. See § 37-92-501(4).

Under the added provision, the General Assembly gave the State Engineer "wide discretion to permit the continued use of underground water consistent with preventing material injury to senior surface water rights." § 37-92-501(4) (a). When regulating the aquifers of Water Division No. 3, section 37-92-501(4) (a) requires that the State Engineer consider the following principles: (1) the aquifer systems are to be maintained at sustainable levels; (2) unconfined aquifers serve as valuable underground storage reservoirs; (3) fluctuations in the artesian pressure in the confined aquifer occur and shall be allowed to continue; (4) the preceding shall not be construed to relieve wells from the obligation to replace injurious depletions to surface flows; and (5) the division's groundwater

use shall not unreasonably interfere with the Rio Grande Compact. § 37-92-501(4)(a)(I)-(V).

Section 37-92-501(4)(b) further requires that when adopting rules pursuant to the power to regulate underground water, the State Engineer shall:

(I) Recognize contractual arrangements among water users, water user associations, water conservancy districts, ground water management subdistricts, and the Rio Grande water conservation district . . . ;

. . . .  
(II) Establish criteria for the beginning and end of the division 3 irrigation season . . . ;

(III) Not recognize the reduction of water consumption by phreatophytes as a source of replacement water for new water uses or to replace existing depletions, or as a means to prevent injury from new water uses; and

(IV) Not require senior surface water right holders with reasonable means of surface diversions to rely on underground water to satisfy their appropriative water right.

§ 37-92-501(4)(b).

Under section 37-92-501(4)(c), the State Engineer must also approve any new plan of groundwater management promulgated by a subdistrict.<sup>6</sup> In order to grant such approval, the State Engineer must ensure that the plan conforms to the requirements set out in paragraphs (a) and (b) of subsection (4), described above. § 37-92-501(4)(c). So long as the ground water management plan meets those requirements, the State Engineer may

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<sup>6</sup> In contrast, if the plan in question is the "official plan" of a subdistrict and does not contain a ground water management plan, the plan need not go through the State Engineer for approval. See § 37-48-126(2).

not curtail underground water withdrawals made pursuant to the plan. Id.

## **2. The Trial Court**

The judicial standard of review of a plan of water management differs depending on whether the court is reviewing the State Engineer's approval of a ground water management plan under section 37-92-501(4)(c) or the official plan of a subdistrict under section 37-48-126(b).

### **a. State Engineer Approval of a Ground Water Management Plan Pursuant to Section 37-92-501(4)(c)**

Section 37-92-501(4)(c) provides that judicial review of the State Engineer's approval of a ground water management plan shall proceed in accordance with section 37-92-501(3)(a), which states that "[a]ny person desiring to protest a proposed rule and regulation may do so in the same manner as provided in section 37-92-304 for the protest of a ruling of a referee." Section 37-92-304 provides, in turn, that such a protest proceeds through filing a pleading with the water court, which hears the matter de novo. § 37-92-304(2)-(3).

The water court must judge a ground water management plan by the same standards as rules and regulations promulgated by the State Engineer. First, section 37-92-501(4)(c), in referring to section 37-92-501(3)(a), establishes that the approval of a ground water management plan shall take place in

the same manner as review of a regulation. Second, the plain language of section 37-92-501(4)(c) makes clear that the same substantive standards apply to a ground water management plan as apply to proposed rules and regulations; a ground water management plan must "meet the requirements" of section 37-92-501(4)(a) and (b). See § 37-92-401(4)(c). Finally, an approved plan substitutes for rules which would otherwise be promulgated by the State Engineer and the State Engineer cannot curtail groundwater withdrawals made pursuant to an approved ground water management plan meeting the rulemaking criteria. Id.

Although the water court must review the State Engineer's approval of a ground water management plan de novo, the State Engineer's approval of a plan is entitled to the same presumption of validity as water use regulations. This official's policy determinations are valid unless shown invalid by a preponderance of the evidence, but determinations of law receive no deference. Cotton Creek Circles, 181 P.3d at 261. Determinations of law include the extent to which rules and regulations -- or in this case, a ground water management plan -- are supported by statutory authority. Id.

In reviewing a ground water management plan, the concern for the water court, aside from constitutional issues, is whether the plan meets the requirements of section 37-92-501(4). The gravamen of the inquiry is whether the plan finds support in



statutory and constitutional authority, a question of law. Accordingly, the water court should not defer to the State Engineer's conclusions regarding the plan's compliance with statutory and constitutional requirements.

After the water court concludes its review, section 37-92-501(4)(c) requires the water judge to retain jurisdiction over the water management plan "for the purpose of ensuring that the plan is operated, and injury is prevented, in conformity with the terms of the court's decree approving the water management plan." § 37-92-501(4)(c) (emphasis added).

#### **b. Official Plan of a Subdistrict**

Review of the official plan of a subdistrict takes place in the district court which oversaw the establishment of the subdistrict. § 37-48-126(3)(b).

A subdistrict's approval of its official plan is most akin to a government body's quasi-legislative action. Quasi-legislative action is "prospective in nature, is of general application, and requires the balancing of questions of judgment and discretion." City & Cnty. of Denver v. Eggert, 647 P.2d 216, 222 (Colo. 1982). Quasi-legislative actions are of general applicability and do not determine specific cases and controversies. Id. Quasi-judicial action, on the other hand, decides rights, duties, or obligations of specific individuals by applying presently existing legal standards or policy

considerations to past or present facts. Colo. Ground Water Comm'n v. Eagle Peak Farms, Ltd., 919 P.2d 212, 217 (Colo. 1996).

Adoption of the plan through a public process is quasi-legislative in nature. Propounding a plan of water management requires the subdistrict and district -- and the State Engineer when a ground water management plan component is included -- to exercise their policy judgment, considering and balancing a number of policy goals. See § 37-48-108(4) (declaring that a plan of water management shall operate in any lawful manner "so as to assure the protection of existing water rights and promote the optimum and sustainable beneficial use of the water resources"). A subdistrict plan is prospective in nature: it applies generally applicable policy going forward rather than adjudicating the rights of individuals in particular controversies by applying law to the facts of a case.

Because adoption of an official plan is a quasi-legislative action, the most appropriate standard of review for the trial court is "reasonableness." See Eagle Peak Farms, 919 P.2d at 217 (applying the reasonableness standard to an agency rulemaking, which it determined to be a quasi-legislative action); see also Citizens for Free Enter. v. Dep't of Revenue, 649 P.2d 1054, 1065 (Colo. 1982) (concluding that the department acted "reasonably" in promulgating a regulation). When

reviewing quasi-legislative action, a court presumes that the action is valid and does not substitute its policy judgment for that of the decision-making body. Eagle Peak Farms, 919 P.2d at 217 (concluding that the rules adopted by an agency are presumed to be valid).

Accordingly, a party challenging the official plan of a subdistrict has the burden to show that the plan is unreasonable or arbitrary, or that the subdistrict, in adopting the plan, "violated constitutional or statutory law, exceeded its authority, or lacked a basis in the record" for the plan provisions. Id. When the trial court's review encompasses those aspects of the official plan that contain a ground water management plan, greater scrutiny is required; thus, the provision for State Engineer approval and water court review followed by its exercise of retained jurisdiction.

Where the official plan of a subdistrict contains a ground water management plan, the trial court reviewing the official plan may consolidate the hearings on the groundwater management plan with the hearings on the official plan for purposes of judicial economy. § 37-48-126(3)(b). When the cases are consolidated, neither the standard of review nor the burden of proof changes. Each case stands on its merits.

**D.**  
**Application to this Case**

Examining the Plan as decreed, we conclude that it meets the applicable statutory criteria. Comprehensive and detailed, it contains sufficient content and procedures for approval in pursuit of the statutory purposes, including protection against material injury to adjudicated senior surface rights and achievement of sustainable water levels in San Luis Valley aquifers.

**1. The Plan's Provisions**

To address and remedy significant declines in groundwater levels in the unconfined aquifer due to an overdevelopment of groundwater and sustained regional drought, the Plan as decreed aims at "reducing and managing overall groundwater consumption" in order to

cause groundwater levels in the Unconfined Aquifer of the Closed Basin to recover, and then to maintain a sustainable irrigation water supply in the Unconfined Aquifer with due regard for the daily, seasonal and longer term demands on the aquifer and to protect senior surface water rights and avoid interference with Colorado's obligations under the Rio Grande Compact.

Its overall objective is

to provide a water management alternative to state-imposed regulations that limits the use of irrigation wells within the Subdistrict, that is, a system of self-regulation using economic-based incentives that promote responsible irrigation water use and management and insure the protection of senior surface rights.

The Plan covers operation of wells within the Subdistrict, excluding wells pumping less than fifty gallons per minute and in production as of 1971 for domestic purposes and small-scale farming operations. It employs financial incentives to reduce consumption of unconfined aquifer water by Subdistrict water users to a level less than aquifer recharge while protecting against material injury to senior surface water rights. It provides a "non-exclusive list" of specific acts and improvements to achieve this goal. These include active maintenance of the hydraulic divide, a program of temporary fallowing of irrigated acres to reduce groundwater consumption, incentives for permanent removal of lands from irrigation, replacement of stream depletions, infrastructure efficiency improvements, purchase and retirement of irrigated lands or water rights in the San Luis Valley, conservation education and research, and improved operations of irrigation and diversion infrastructure.

In order to reduce the injurious effect of well pumping, the Plan seeks to monitor and maintain a mound of groundwater as a hydraulic divide between the unconfined aquifer of the Closed Basin and the unconfined aquifer more clearly tributary to the Rio Grande. Whereas previous court decrees and groundwater studies indicate that such a divide formerly existed, none

clearly exists today -- perhaps one reason why Subdistrict well pumping is currently causing depletions to the Rio Grande and its tributaries. Using Subdistrict revenues, the Plan provides for observation wells, maintenance of surface canal flows, and a reduction of groundwater pumping in a section of the Subdistrict to attempt to re-establish and maintain the hydraulic divide.

The Plan also employs financial incentives and participation in the federal Conservation Reserve Enhancement Program (CREP)<sup>7</sup> to retire up to 40,000 irrigated acres, in order to achieve a sustainable unconfined aquifer level between 200,000 and 400,000 acre-feet below the level that existed on January 1, 1976.<sup>8</sup> It sets incremental goals to retire acreage

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<sup>7</sup> The U.S. Department of Agriculture's Farm Service Agency (FSA) administers CREP as a voluntary agricultural land retirement program to help farmers protect environmental values. Under CREP, the FSA contracts with a governmental entity, such as the Subdistrict, for ten to fifteen year commitments to keep eligible lands out of agricultural production in exchange for federal payments. Funding is provided from the FSA's Conservation Reserve Program along with matched funds from the local entity. See Conservation Reserve Enhancement Prog., U.S. Dep't of Ag. Farm Serv. Agency, <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=cep> (last visited Dec. 9, 2011).

<sup>8</sup> As the trial court found, accurate quantification of the amount of water stored in the unconfined aquifer underlying the San Luis Valley began in 1976. According to uncontested data introduced at trial, the 2008 storage level of the unconfined aquifer was around 800,000 acre-feet below levels measured in 1976. After 1976, the level in the aquifer was measured at more than 400,000 acre-feet below 1976 levels briefly in 1978-79 and in 1981-82. The unconfined aquifer level dropped precipitously beginning in 2002 down to more than one million acre-feet below 1976 levels.

from irrigation: 20,000 acres less than the total acreage irrigated in 2000 by the end of the fifth calendar year from judicial approval of the Plan, 30,000 acres less by the seventh year, and up to 40,000 acres less by the tenth year. If by year ten of the Plan the aquifer has not risen to the level the Plan considers sustainable, the Subdistrict will raise and spend revenue to reduce groundwater consumption further.

The Plan sets out three annual fees: (1) an administrative fee of up to five dollars per acre to fund operations, (2) a CREP fee of up to twelve dollars per acre to fund the local components of the CREP contract, and (3) a variable fee of up to seventy-five dollars per acre foot of water used minus the water the user recharged to the aquifer.

To calculate the variable fee for each user, the third component of the annual fee, the Subdistrict must determine each user's annual consumptive use and the user's "surface water credit," which is derived from the amount of surface water the user applied to irrigated acreage or recharged directly to the

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District personnel take measurements of the unconfined aquifer at twenty-seven wells located within the Subdistrict. The District applies a complicated formula to arrive at an overall aquifer storage amount. The Plan states that its unconfined aquifer storage level goals are to be gauged based on a five-year running average of these monthly measurements. The trial court found that the method of analysis and data collection for aquifer storage monitoring is an adequate tool for measuring changes in the aquifer and appropriate for determining Subdistrict compliance with the Plan.

aquifer. The surface water credit is a marketable commodity that may be carried over for one year to offset groundwater pumping or be exchanged, traded, leased, or sold to other well users within the Subdistrict covered by the Plan. In practice, if a Subdistrict water user at the end of the Plan year has a balance of surface water credit remaining after subtracting groundwater pumping, the user may carry it over or trade it to other farm units covered by the Plan. The Plan requires all surface water credit trades to be reported and accounted for in the submission of farm unit data to the State Engineer as part of the annual replacement plan.

The Plan's surface water credit allows the Subdistrict to calculate net groundwater consumption of each water user (gross withdrawals minus recharge), in order to make the variable fee a rational assessment. The credit supports one purpose of the variable fee component -- to sustain unconfined aquifer levels by incentivizing Subdistrict members to bring more water into the aquifer than they pump out of it. Subdistrict water users relying solely on surface water rights or on well water pumped from the confined aquifer may be exempted by the Board from paying annual service and user fees.

Based on model runs of the unique Subdistrict "response functions" derived from RGDSS and used to project stream depletions under the Plan, the reduction of Subdistrict



groundwater consumption by fallowing 40,000 irrigated acres is projected to reduce total stream depletions to 1,426 acre-feet per year by 2040.

The Plan by its terms and necessary implications admits that the current and historic operation of Subdistrict wells has caused and will continue to cause stream depletions to the Rio Grande and its tributaries in the foreseeable future. According to RGDSS model runs of Subdistrict groundwater consumption in the past and the resulting lagged effects on streams, pre-2010 well pumping by Subdistrict users is expected to cause an estimated 48,993 acre-feet of cumulative stream depletions from 2010 to 2028.

The Plan's appendices provide the detail for yearly operation of the Plan through the device of an annual replacement plan. Appendix 1 supplies the framework for the Subdistrict's annual replacement plan to insure prevention of injury to senior water rights. Based on the RGDSS model, each annual replacement plan estimates groundwater pumping amounts and the location, month, and amount of injurious depletions predicted to occur that year.

The annual replacement plan will operate from May 1 to April 30, be provided to the State Engineer before April 15, and be made publically available. The Subdistrict must collect and provide baseline data on (1) forecasted streamflows in the

basin; (2) total surface diversions into the Subdistrict for the previous year; (3) groundwater levels in the Subdistrict as reported by the District, the Subdistrict, and the USGS; (4) amounts recharged pursuant to recharge decrees; (5) amount and sources of replacement water available to the Subdistrict for the year; (6) total groundwater withdrawals during the prior Plan year from all active Subdistrict wells identified in the plan; (7) location of fallowed lands through CREP or Subdistrict programs; and (8) irrigation data on acreage, crops, method, amount, and water source.

The Subdistrict must estimate stream depletions for the replacement plan year, including lagged depletions caused by prior year pumping, calculated using response functions derived from the current RGDSS groundwater model and its estimate of the total groundwater consumption by Subdistrict wells offset by recharge.

The replacement plan's calculation of lagged depletions to streams each year from Subdistrict groundwater use requires an estimate of the net Subdistrict groundwater consumption based on crop consumption from sprinkler irrigation and flood irrigation and other municipal and industrial groundwater consumption, minus the estimate of the total unconfined aquifer recharge within the Subdistrict based on recharge decrees and anticipated hydrological conditions. RGDSS response functions then

calculate the loss to surface streams from the net groundwater consumption on a monthly basis, lagged over time. Lagged stream depletions that are the result of groundwater pumping in previous years are added to arrive at the annual estimate of stream depletions that must be replaced during the replacement plan year.

The annual replacement plan must include the Subdistrict's methodology for computing the RGDSS response functions used to estimate stream depletions. As the trial court found, engineers and hydrogeologists commonly use response functions to project and calculate cause-and-effect relationships with different variables. Here, expert consultants developed Subdistrict-specific response functions to project stream depletions from Subdistrict well pumping in dry, wet, and average years. These response functions incorporate the non-linear nature of the depletions due to the complex hydrogeology of the San Luis Valley, and the fact that the model runs predict distinct stream depletion lagging patterns based on the background hydrologic conditions for the year.

The annual replacement plan will use response functions to predict -- based on monthly net Subdistrict groundwater consumption -- stream depletions occurring during the year of the groundwater pumping and depletions that do not affect the stream until future years. The Plan calls for regular revision

of the Subdistrict response functions after three, six, and ten years from Plan initiation and every five years thereafter.

Because of the nature of the complex RGDSS model and the derivative Subdistrict response functions, the calculation of stream depletions under the annual replacement plan is accurate to within fifty acre-feet per year, a model stress of 0.05 percent. The annual replacement plan must include a procedure and timelines to deliver replacement water to any injured water rights on the Rio Grande or Conejos River, or any other stream, including delivery to the stateline Rio Grande Compact gauges to reduce any compact curtailment in effect and remedy any injury to water rights curtailed. It must report on the availability of -- and the Subdistrict's actual ability to acquire -- replacement water to cure injurious depletions.

The annual replacement plan must include measurement data from hydraulic divide observation wells, along with a summary report analyzing the current condition and location of the divide. It must tabulate the five-year running average of the storage level of the unconfined aquifer as calculated by an outside consulting firm's study. The Subdistrict must report monthly on the actual delivery of replacement water to the stream system, and report annually to the USDA on acres enrolled in following programs including CREP.

Finally, the Subdistrict must report to the Division Engineer annually at the end of the plan year, reviewing the Plan's actual operation for the year. This report must include a recalculation of actual stream depletions with observed flow and water use data. The Subdistrict will cure any calculated under-deliveries to injured water rights. For injured water rights on Compact streams, the Subdistrict will cure by delivering replacement water to the state line before the next irrigation season. For injured water rights on streams not subject to Compact curtailment under Alamosa La-Jara, 674 P.2d at 927, the Subdistrict will cure by delivering replacement water during the next plan year.

Appendix 2 of the Plan provides the methodology for calculating surface water credit allocated to each farm unit participating in the Subdistrict fee schedule.

Appendix 3 is a Subdistrict well database, which includes detailed information on active wells, inactive wells, non-Subdistrict wells, augmentation plan wells, and abandoned wells. The Subdistrict must update the database yearly and submit it to the State and Division Engineers as part of the annual replacement plan.

Appendix 4 is the budget and accounting plan for the Subdistrict's plan for water management. The annual Subdistrict budget will include planned expenditures to acquire replacement

water, to contribute to land retirement programs, to improve infrastructure, and any other projected costs. The appendix describes procedures to provide Subdistrict members with notice of the Subdistrict's yearly budget and an opportunity to comment or meet with Subdistrict and District board members to present concerns or questions.

Appendix 5 is the operational timeline for Plan activities. It includes estimates for initiating and completing each detailed task needed to execute the full amended Plan, including preparing farm unit fee schedules, obtaining Subdistrict well meter readings, estimating yearly net consumptive groundwater use and stream depletions, and projecting monthly delivery of replacement water.

## **2. The Decree's Additional Terms and Conditions**

The terms and conditions of the trial court's decree primarily concern additional detail for public notice and comment to various stages of the annual replacement plan's yearly drafting and approval process. These conditions include: (1) notice for all Subdistrict meetings on terms or approval of the annual replacement plan, (2) public posting of the full language of any proposed annual replacement plan, with the annual plan mailed to everyone on the Division 3 substitute supply plan notification list, (3) filing of the annual replacement plan with the water court and posting it on the web

along with its submittal to the Division and State Engineers, (4) notice with the court and the public of the State Engineer's approval of the Subdistrict's annual replacement plan following a public comment period, (5) retained jurisdiction over all aspects of the Plan, with any party wishing to challenge the terms of the annual replacement plan entitled to invoke the water court's jurisdiction within two weeks of the State Engineer's approval.

The water court also required the Subdistrict to remedy all ongoing injurious depletions from past Subdistrict pumping, beginning with the 2012 irrigation season. The decree invokes the retained jurisdiction provision of section 37-92-501(4)(c) to ensure that the Plan will operate procedurally and substantively so that senior surface water users will have adequate opportunities to present their concerns and objections and to appeal decisions of the State Engineer that they oppose. The decree specifies that any party challenging any part of the annual replacement plan may invoke the court's retained jurisdiction within fourteen days of the State Engineer's approval of the plan each spring. The trial court retained jurisdiction for the purposes of enforcing its judgment and decree, hearing challenges to the annual replacement plan, and any other issues concerning injury in the operation of the Plan. In the water court's words:

Should there be issues of alleged injury in the operation of the Amended Plan, the Court retains jurisdiction to take action based on its original and exclusive jurisdiction over lands and property included or affected by the Subdistrict under section 37-48-124(2), and under the water court's retained jurisdiction "over the water management plan for the purpose of ensuring the plan is operated, and injury is prevented, in conformity with the terms of the court's decree approving the water management plan." § 37-92-501(4)(c).

In accordance with section 37-48-126, we determine that the Plan as decreed is sufficiently comprehensive and detailed. In accordance with section 37-92-501(4), we conclude that the Plan as decreed is designed to permit the continued use of underground water consistent with preventing material injury to senior surface water rights.

### **3. The Objectors' Contentions**

#### **a. The augmentation and no-injury finding objections**

Objectors would have us review a subdistrict plan, including its groundwater management component, as if the court were considering an application for an augmentation plan. They invoke the requirements for augmentation plan review and approval that necessitate a judicial finding under sections 37-92-305(3)(a), (5), and (8) of no material injury to adjudicated senior water rights prior to approval of the application. In seeking to apply these provisions to approval of the Subdistrict's Plan, they construe section 37-92-501(4) to incorporate an equivalent threshold no-injury finding



requirement. The trial court rejected this construction of the statute, as do we.

The threshold no-injury finding and other requirements of the augmentation plan statute applied by our case law do not apply to approval and review of a subdistrict plan, unless the plan includes application to the water court for adjudication of an augmentation plan. See §§ 37-48-123(2)(g), 37-48-126(1), 37-92-305(6)(c).

Despite their differences, the augmentation statutes and subdistrict plan statutes aim to accomplish a similar ultimate goal: integration of tributary groundwater and surface water into the priority system of water rights in a manner that protects against injury to decreed senior rights from out-of-priority diversions. Augmentation plans are initiated by application to a water court under sections 37-92-203 and -302 of the 1969 Act. In contrast, Water Division No. 3 subdistrict water management plans, including any ground water management plan component, proceed through an extensive process involving the subdistrict, the Rio Grande Water Conservation District, the State Engineer, the Alamosa County District Court, and the Water Court for Water Division No. 3.

SB 04-222, as codified in section 37-92-501(4), enacts a new procedure designed to protect senior users and the aquifers in the San Luis Valley in light of the valley's historical

conjunctive water use practices and its unique hydrogeology. The statute upholds the no-injury principle, an essential part of Colorado's prior appropriation system. In doing so, the overall design of the subdistrict plan approval statutes, sections 37-48-123 and 37-48-126, in concert with the statutory provisions applicable to a "ground water management plan" under section 37-92-501(4), provide an alternate means for protecting adjudicated senior surface rights in Water Division No. 3 against material injury.

The General Assembly fashioned section 37-92-501(4) (a) and (b) to promote aquifer sustainability, protect senior rights, and avoid unnecessary curtailment of well pumping in Water Division No. 3. Section 37-92-501(4) (a) limits curtailment of groundwater use within that division to "the minimum necessary to meet the standards of this subsection." It directs pursuit of the goal of a sustainable water supply in each aquifer system, recognizes that the unconfined aquifers serve as valuable underground water storage reservoirs, and provides that the unconfined and confined aquifers may fluctuate with due regard for the daily, seasonal, and long-term demand for underground water. § 37-92-501(4) (a) (I)-(III).<sup>9</sup>

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<sup>9</sup> The statute establishes that senior surface right holders who divert from streams by "reasonable means" need not drill wells to satisfy their lawful demand. § 37-92-501(4) (b) (IV); see Alamosa-La Jara, 674 P.2d at 934-36.

As indicated by the word "management," a ground water management plan is broadly written and includes a high proportion of wells in an area in order to meet the principles and intent of paragraphs (a) and (b). Such a plan must be consistent with confining "[f]luctuations in the artesian pressure in the confined aquifer system" to "the ranges that occurred during the period of 1978 through 2000." § 37-92-501(4) (a) (III). Such a plan must not allow groundwater use to "unreasonably interfere with the state's ability to fulfill its obligations under the Rio Grande compact." § 37-92-501(4) (a) (V).

The need for collective action clearly drove the legislature's decision to place the ground water management planning power within the auspices of a subdistrict. Subdistricts already had the power to issue bonds, to enter into contracts, and to levy certain rents, fees, and charges. See §§ 37-48-156, -157, -189. In 2007, on the heels of SB 04-222 (which first provided for ground water management plans), the legislature enlarged the powers of the District, allowing it to assess charges and fees on the use of water within a subdistrict, "[i]n connection with a plan of water management." Ch. 300, sec. 1, § 37-48-105(n), 2007 Colo. Sess. Laws 1271 (SB 07-220). Subdistricts likewise gained the ability to fix and collect "rents, rates, fees, tolls, and other charges . . . for

direct or indirect connection with . . . a plan of water management,” and to base such charges on surface or groundwater usage. Ch. 300, sec. 26, § 37-48-189(1)(a), (2)(a)(VIII), 2007 Colo. Sess. Laws at 1285-86. The use of these tools in connection with a plan of water management allows subdistricts to include large numbers of groundwater users in pursuit of a flexible, long-term and effective management plan.<sup>10</sup> The goals and tools of these ground water management plans show that the General Assembly did not intend that subdistricts would have to identify in detail their future sources of replacement water (and timings and amounts) upon adoption of the plan, as they would have to for an augmentation plan.

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<sup>10</sup> Ray Wright, President of the Rio Grande Water Conservation District, explained the purpose of the 2007 act and its new funding tools, this way:

Most importantly . . . , it allows the subdistrict to impose user fees on groundwater usage. We contemplate that such fees collected would be available for a number of purposes, but primarily for the retirement of lands with groundwater pumping. . . . It's imperative that we have the flexibility and the new authority allowed within this bill for our concept of groundwater management subdistricts to have a chance to move forward. And we're trying something extremely new and different here, where individual business decisions as well as a market based approach to ground water regulation will hopefully provide an alternative to the massive sorts of curtailments that have occurred in other regions of the state.

*Hearing on S.B. 07-220 Before the H. Comm. on Agriculture, Livestock, and Natural Resources, 2007 Leg., 66th Sess. 1 (Colo. Apr. 11, 2007).*

So long as the General Assembly acts consistently with the constitution, it is free to create new tools allowing out-of-priority depletions, with a different mechanism for ensuring non-injury than an augmentation plan. A subdistrict water management plan is "comprehensive" and "detailed," see § 37-48-126(1), and "consistent with preventing material injury to senior surface water rights," see § 37-92-501(4), if it meets two criteria. First, the ground water management plan must be sufficiently comprehensive and detailed to warrant State Engineer and water court approval. Second, the plan must include such provisions as will ensure that no material injury results from operation of the plan.

The trial court, taking expert testimony into account in its review of the Plan, made the following finding and conclusion regarding the critical factor: the ability of the annual replacement plan to estimate and replace depletions in time, amount, and location to prevent injury:

The Court acknowledges the potential for over or under-replacing injurious stream depletions and finds that, in considering the inherent difficulty of predicting future events, and the limitations on the overall accuracy to which water rights are capable of being measured and administered, computing any such under-deliveries after the irrigation season and replacing those under-deliveries as part of the next Annual Replacement Plan does not make the Amended Plan unlawful or fail to meet the requirements of section 37-92-501(4)(a) and (b). . . . The critical factor, however, is that the Annual Replacement Plan make the best possible prediction of stream depletions, and

that the Division Engineer administer the Amended Plan to ensure all estimated depletions are replaced where and when required. The provisions of the Amended Plan, if properly implemented, will accomplish this goal and truly do all that is required and reasonably possible to prevent injury.

(Emphasis added).

The trial court found that the accuracy of the RGDSS model and response functions for predicting injurious depletions at present is within a margin of error of fifty acre-feet. Based on the evidence, the trial court found this margin of error to be within the present state of the art and continued refinement of the tools available will likely produce closer accuracy in the future.

The trial court found that total average stream depletions for the 1996 through 2005 study period were 6,101 acre-feet annually. The trial court's judgment and decree clearly enunciates a standard for the annual replacement plan to prevent and correct, through the annual beginning-of-the-year prediction and the year-end adjustment process, any material injury to adjudicated senior surface rights at the time, amount and location replacement water is required.

We conclude that the trial court made the requisite finding that the Plan as decreed includes sufficient measures for replacement of all injurious depletions. At oral argument, counsel for the Subdistrict acknowledged that, under the

statutes and the decree, the burden of showing that the annual replacement plan operates to protect adjudicated senior surface water users against material injury remains with the Subdistrict. When a surface water right holder properly alleges material injury under the Plan as decreed, the Subdistrict bears the burden under retained jurisdiction of going forward with evidence, as well as sustaining its burden of proof, to demonstrate non-injury.

Because the Subdistrict must replace all injurious depletions, and bears the burden of proof of non-injury, we expect the Subdistrict, in order to avoid needless controversy, will replace all predicted injurious depletions.

Section 37-92-501(4)(c) incorporates subsections (4)(a) and (b), and sets up a State Engineer approval and implementation process for ground water management plans, subject to water court review. In providing for retained jurisdiction by the water court to prevent injury, section 37-92-501(4)(c) also requires that the State Engineer

shall not curtail underground water withdrawals from aquifers in division 3 that are included in a ground water management subdistrict . . . if the withdrawals are made pursuant to a ground water management plan adopted by the subdistrict that meets the requirements of paragraphs (a) [including prevention of injury to senior surface rights] and (b) of this subsection (4).

(Emphasis added).

If following approval by the State Engineer, the trial court, and us, the Subdistrict does not adhere to the Plan, its users would no longer be making underground water withdrawals pursuant to the Plan. If the Plan is not "preventing material injury to senior surface water rights," § 37-92-501(4)(a), the Plan would no longer meet the requirements of section 37-92-501(4)(c). In either case, the effective condition preventing the State Engineer from "curtail[ing] underground water withdrawals," § 37-92-501(4)(c), would cease to apply.

The legislature has made it clear that the State Engineer may promulgate rules and regulations for curtailing groundwater withdrawals that injure senior surface water rights. § 37-92-501(1) (providing that the State Engineer "may adopt rules and regulations to assist in, but not as a prerequisite to" performance of that office's duties which include not allowing "ground water withdrawal which would deprive senior surface rights of the amount of water to which said surface rights would have been entitled in the absence of such ground water withdrawal"). However, even in the absence of such rules, the State and Division Engineers must curtail groundwater withdrawal as necessary to protect senior rights, in fulfillment of their statutory duty to administer and distribute the waters of the state in accordance with the constitution and laws of Colorado. Id. If the Subdistrict does not adhere to the Plan, or the Plan



is not preventing material injury to senior surface water rights, the State Engineer must curtail groundwater withdrawal in the Subdistrict as necessary to prevent material injury to senior surface water rights, even in the absence of rules and regulations.

In sum, the Subdistrict's Plan accords with the statutory criteria for preventing injury to adjudicated senior surface water rights.

**b. The State Engineer lacks authority objection**

Objectors argue that the State Engineer has no authority to approve annual replacement plans, because the statute assigns this official no such authority and because such approval is a "water matter" assigned exclusively to the water court. Objectors rely primarily on V Bar Ranch, LLC v. Cotton, which belies their point. 233 P.3d 1200 (Colo. 2010). There we explained that while it is generally true that disputes involving water matters are within the exclusive jurisdiction of the water court, the General Assembly has specifically assigned authority over certain water matters to the State Engineer. Id. at 1206. One of these delegated matters is the discharging of obligations of the State of Colorado imposed by judicial order. Id.; see § 37-80-102(1)(a). Another is regulation of the distribution of waters of the state. V Bar Ranch, 233 P.3d at 1206; see §§ 37-80-102(1)(h), 37-92-301(1), -304(8). A third is

to conduct investigations related to carrying out the foregoing powers. V Bar Ranch, 233 P.3d at 1206; see § 37-80-102(1)(f). These powers substantiate the State Engineer's authority to investigate the adequacy of an annual replacement plan and rule on whether to allow water distributions under such a plan, when that official undertakes these actions in faithful response to a court decree.

**c. The trial court lacks authority objection**

Objectors argue that the trial court lacked authority to decree additional procedural terms and conditions for operation of the Plan. But, the General Assembly recognizes this authority in section 37-92-501(4)(c), which provides for retained jurisdiction to ensure, inter alia, "conformity with the terms of the court's decree approving the water management plan." Further, section 37-92-304, which governs judicial review of ground water management plans,<sup>11</sup> allows the water court to "either confirm, modify, reverse, or reverse and remand" a ground water management plan. § 37-92-304(5) (emphasis added).

We do not presume that the legislature uses language idly. We give effect to every word of statute and render none superfluous. Colo. Water Conservation Bd. v. Upper Gunnison

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<sup>11</sup> See § 37-92-501(4)(c) ("[J]udicial review of such approval shall be pursuant to paragraph (a) of subsection (3) of this section."); § 37-92-501(3)(a) (pointing in turn to section 37-92-304).

Water Conservancy Dist., 109 P.3d 585, 597 (Colo. 2005). A subdistrict is empowered to modify a previously adopted plan upon remand from the trial court and the trial court may add decree conditions designed to ensure compliance with the statutory criteria, including prevention of material injury to other water rights.

**d. The delay of implementation objection**

Objectors argue that the trial court erred in delaying the implementation of replacement of injurious depletions under the Plan until 2012, because the delay will cause material injury to senior water rights. Because the Subdistrict could not begin to be funded until late 2011, the trial court at the time it entered its judgment and decree determined it would be impossible for the Subdistrict to leverage those funds into replacement water until 2012. Assuming that the legislature did not mandate the impossible, the trial court delayed the implementation of this part of the Plan.

No subdistrict is required to adopt a ground water management plan; indeed, no subdistrict is required to exist. Putting the Plan into effect necessarily must account for the time necessary to conduct judicial review of the Plan. Thus, the necessary delay in implementation already recognized by the trial court, and any further delay in implementation

necessitated by the time involved in resolving this appeal, resides within the sound discretion of the trial court.

**e. The recharge decrees objection**

Objectors argue that the Plan violates the terms of recharge decrees held by the Rio Grande Canal Water Users Association, the San Luis Valley Irrigation District, the Rio Grande Water Users Association, the Prairie Ditch Company, and the San Luis Valley Canal Company.<sup>12</sup> We disagree. Those decrees are res judicata and no change of water right has been instituted or has occurred in this case that would alter their

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<sup>12</sup> The lack of reservoir storage in the valley led to the widespread practice of using the unconfined aquifer as an underground storage reservoir and to the practice of subirrigation discovered almost by accident when springtime Rio Grande diversions into the porous Closed Basin soils led to a rapid rise in the water table. Natural Resources Comm., Regional Planning: Part VI - The Rio Grande Joint Investigation in the Upper Rio Grande Basin in Colorado, New Mexico, and Texas 1936-1937, at 67 (1938). As practiced intentionally, subirrigation involved raising the water table to within one to three feet of the surface through shallow ditches spaced between crops, allowing seepage into root systems. See id.; William J. Powell, Ground-Water Resources of the San Luis Valley Colorado, Geological Survey Water-Supply Paper 1379, at 45 (1958).

Although intervening drought years and high-capacity groundwater pumps brought down the water table and eliminated subirrigation in the valley, the historical practice of recharging the Closed Basin unconfined aquifer through Rio Grande diversions, and pumping the water to irrigate with center pivot sprinklers during the irrigation season, continued.

The water court eventually recognized this imported water and its historical underground storage and use in five decrees. Four of these recharge decrees recognize diversions during high spring flows, and one during winter. Each quantifies the recharge amount and grants the ditch's shareholders the right to store the water in the aquifer for subsequent use and reuse.

terms. Instead, the Plan contains a mechanism for the beneficiaries of the recharge decrees to receive credits and pay lesser charges for the advantage of their injurious depletions being addressed and remedied by means of the Plan. The Plan does not confiscate any portion of the lawful use of water by a beneficiary of the decrees, nor does the inclusion of reasonable consumptive use calculations into the RGDSS model effectuate an uncompensated taking of a water right or a change of water right.

For Subdistrict lands receiving water from a ditch with a recharge decree, the RGDSS system assigns the land a quantity of the recharged water equal to the land's pro rata share in the ditch organization. The model then uses this quantity as an offset against withdrawals by Subdistrict members, effectively reducing calculated depletions.

The purpose of the analysis conducted under the Plan is not to award or deprive Subdistrict members of water, but to arrive at an accurate estimate of injurious depletions that the Subdistrict must replace in order to avoid materially injuring adjudicated senior surface water rights. If the Subdistrict Plan were to ignore the recharge decree water rights owned in part by Subdistrict members, those Subdistrict members would have to replace more water, through fees and fallowing, than they deplete from the aquifer out-of-priority. Such an

arrangement would ignore the decreed historical use of the unconfined aquifer as a storage basin for duly appropriated water, and would effectively deprive Subdistrict members of their rights to use the recharge decree water.

As the trial court found, it is reasonable for the Subdistrict to offset the water use fee by the amount of water the Subdistrict member brings into the Subdistrict that is not consumed through irrigation practices or other beneficial uses and returns to or is introduced into the unconfined aquifer. This is the purpose and the definition of the surface water credit. Nothing in the fee calculation prevents Subdistrict water right holders from exercising their rights in any lawful way they choose.

**f. The contract objection**

Objectors contest a provision of the Plan allowing the Subdistrict at some future time to contract with well users outside the Subdistrict for replacement water or to extend the protection of the Plan to well users outside the boundaries of the Subdistrict, including entities that make a non-irrigation use. But, provisions of the statute contradict their objection. For example, section 37-92-501(4)(b)(I)(A) provides for the State Engineer to recognize contractual arrangements pursuant to which "[w]ater is added to the stream system . . . to replace depletions to stream flows resulting from the use of underground

water." Sections 37-48-108(3), -134, and -156 give the Subdistrict authority to make contracts with other persons, entities and agencies.

Before it enters into outside-its-boundaries contracts for replacement water or extends the protection of the Plan to other well users to cover those injurious depletions, the Subdistrict under the Plan must adopt rules for the inclusion of such wells through a notice and hearing process. The trial court found that allowing other entities to contract with the Subdistrict to perform the complicated analysis of injurious depletions and to provide the source of replacement water is logical, efficient, and desirable and the RGDSS groundwater model is not an appropriate tool to analyze stream depletions from most individual wells or groups of small numbers of wells. The Plan provides in this regard:

To the extent permitted by law, and in accordance with rules to be adopted by the Subdistrict, the Subdistrict may, at the discretion of the Board of Managers, contract with other well owners either within the Subdistrict exterior boundaries or outside the Subdistrict exterior boundaries to advance the Plan Goals and Overall Objective. In adopting a rule for this purpose, the Subdistrict Board of Managers may only contract with well owners whose wells [sic] impacts can [be] determined using the Subdistrict response functions pursuant to the procedures set forth in Appendix 1.

Objectors argue that this deferred contracting is a failure of the Plan to include all wells, a necessity of a comprehensive and detailed plan. See § 37-48-126(1).

To the contrary, it would have been impossible for the Subdistrict to include contract wells outside the subdistrict at the outset. The Subdistrict had to organize itself before it could exercise its contract power. The legislature clearly provided for subdistricts to be able to contract. Several sections of code allow subdistricts to contract with an extensive list of types of entities. See §§ 37-48-108(3), 37-48-130, 37-48-156. The legislature clearly intended for subdistricts to be able to enter contracts of the type the trial court determined the Subdistrict envisions entering. See § 37-92-501(b), (b) (I), (b) (I) (A) (“[T]he state engineer shall . . . [r]ecognize contractual arrangements among water users . . . [and] ground water management subdistricts . . . pursuant to which . . . [w]ater is added to the stream system . . . to replace depletions in stream flows resulting from the use of underground water . . . .”).

Surely, the legislature did not intend a subdistrict to enter such contracts before the subdistrict legally existed. Nor could the legislature have meant that “ground water management subdistricts,” § 37-92-501(b) (I), could make



contracts based on a ground water management plan that was not yet operative.

To give effect to each word of statute, and avoid absurdities, we conclude that subdistricts are authorized to contract with non-subdistrict well owners for replacement of depletions in stream flows resulting from groundwater use, even though those wells are not individually included initially in the ground water management plan. We further conclude, in construing statutory provisions harmoniously, that deferring the inclusion of these contract wells does not prevent the official plan of a subdistrict from being "comprehensive" and "detailed." See § 37-48-126(1).

The trial court included numerous terms and conditions to ensure public notice, an opportunity to be heard, and the protection of senior surface rights before the Subdistrict can enter a contract of the type Objectors contest in making this argument. Among these is a provision for judicial review calculated to ensure prevention of material injury to adjudicated senior surface rights.

**g. The Closed Basin Project replacement water objection**

Objectors contest the Subdistrict's listing of Closed Basin Project water as a source of replacement water to protect against injurious depletions to surface streams. That project was designed and decreed to provide water to the Rio Grande and

its tributaries to help meet the requirements of the Rio Grande Compact. See Cotton Creek Circles, 181 P.3d at 255. The adequacy, timing and suitability of project water to prevent injury to water rights under the Plan will be addressed through the annual replacement plan procedure and need not be determined at this time.

**h. The phreatophyte objection**

The Subdistrict Plan in relying on the RGDSS model calculates how much water Subdistrict wells deplete from surface streams that must be replaced to the Rio Grande and its tributaries. Objectors argue that the effect of this modeling system is to credit the Subdistrict for reduced evapotranspiration losses by phreatophytes, in violation of the Shelton Farms doctrine and section 37-92-501(4) (b) (III). See Se. Colo. Water Conservancy Dist. v. Shelton Farms, Inc., 187 Colo. 181, 191, 529 P.2d 1321, 1327 (1974) (holding unlawful a plan to salvage water by destroying phreatophytes).

Objectors misconstrue the statute in this regard. The relevant provision provides that a ground water management plan cannot “recognize the reduction of water consumption by phreatophytes as a source of replacement water for new water uses or to replace existing depletions, or as a means to prevent injury from new water sources.” § 37-92-501(4) (b) (III) (emphasis added); see Cotton Creek Circles, 181 P.3d at 262.

The trial court appropriately construed "replace existing depletions . . . to refer to the replacement of actual injurious depletions to surface streams in order to protect senior surface water rights." (Emphasis omitted).

In sum, consistent with Shelton Farms and this statute, the trial court held that the Subdistrict could not destroy phreatophytes to create a replacement water source independent of the priority system, but the Subdistrict is not prohibited from making modeling calculations that take into account reduced evapotranspiration caused by fluctuations in the water table. Construing the section in light of the entire statutory scheme, consistent with legislative intent, we determine that the trial court's interpretation is correct. Section 37-92-501(4)(a)(II) allows the unconfined aquifer to "serve as a valuable underground storage reservoir[] with water levels that fluctuate in response to climatic conditions, water supply, and water demands." The legislature did not intend that groundwater levels should never decline. They were to fluctuate within a historical range. See § 37-92-501(4)(a)(III). Such fluctuations in water level necessarily entail fluctuations in phreatophyte evapotranspiration and the General Assembly did not act to prohibit use of a groundwater model that takes these factors into account.

Objectors' interpretation would lead us to the conclusion that, each time the aquifer level rises, and then declines again, the Subdistrict must pretend that after the decline even less water exists in the aquifer than actually does, because the Subdistrict would have to subtract evapotranspiration savings. Given that the legislature clearly intended aquifer water levels to be able to fluctuate, like a reservoir does, we reject Objectors' construction of the statute. In any event, the Plan aims to increase overall aquifer levels, not put them into further decline.

### **Conclusion**

The people of the San Luis Valley brought this Plan together in response to vigorous debate and action within their community. Consistent with the state's constitutional prior appropriation doctrine, the General Assembly has formulated statutes attentive to the hydrogeology, economy and water use needs of the people and the environment, accomplishing a balancing of land and water resources.

The Objectors have had significant impact in shaping the final form of the Plan as decreed, through the proceedings in these cases. Because of meritorious arguments they made, the Plan and its implementing details have taken on dimensions not originally anticipated by the Subdistrict proponents.

The Plan as decreed complies with the applicable statutory criteria.

**III.**

Accordingly, we affirm the trial court's judgment and decree.

# Appendix

