

Ground Water-Surface Water Interaction

AWSE - Montana

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Introduction

Types of interaction

- Well pumping and permitting
- Aquifer recharge
- Water rights administration

Colorado's Experience

- History of well development
- Senior water rights complaints on over appropriated streams
- 1965 Legislation
- Studies
- 1969 Legislation
 1. Adjudication of tributary wells
 2. Uniform tabulation of water rights by basin and stream
 3. Directions to State Engineer to administer in priority with recognition of value of beneficial use of wells
 4. Rule making authority
 5. Plan for Augmentation – concept and how used to protect water rights
 - “means a detailed program to increase the supply of water available for beneficial use in a basin by the development of new or alternate points of diversion, by a pooling of water resources, by water exchange projects, by providing substitute supplies of water, by the development of new sources of water, or by any other appropriate means.”
 - Used to address delayed impacts of well pumping and challenges of well owners that curtailment would not immediately benefit a calling water right

State Engineer's Efforts 1970 to the Present

- Rule making efforts in 3 over appropriated basins – S. Platte, Arkansas, and Rio Grande
- Peace of the 1980 and 1990's – favorable water supply conditions and cooperation

- Arkansas River basin rules in response to interstate litigation
- S. Platte River basin conflicts beginning in 2002 due to drought, competition, court decisions and loss of cooperation

- New rules to be filed in Rio Grande basin this year

Current Administration Practices and Consequences

- Arkansas River basin – near real time administration of SW-GW
 1. Operation under annually approved replacement plans
 2. Well measurement and reporting of monthly pumping

- South Platte River
 1. Operation under Water Court approved plans for augmentation
 2. Pumping estimated by consumptive use or meters

- Wells curtailed and not pumping – over 2000 in S. Platte and 1000 in Arkansas

- Long term outlook