Colorado House Bill 12-1278 – South Platte River Alluvial Aquifer Study

HB12-1278 states that the study's objectives are:

> (i) to evaluate whether current laws and rules that guide water administration in the South Platte river basin achieve the dual goals of protecting senior water rights and maximizing the beneficial use of both surface water and groundwater within the basin;
>
> (ii) to identify and delineate areas within the basin adversely impacted by high groundwater levels and to conduct a feasibility-level evaluation of the causes of high groundwater levels in the affected areas;
>
> (iii) to provide information to use as a basis for implementation of measures to mitigate adverse impacts in areas experiencing high groundwater levels; and
>
> (iv) to provide information to the general assembly, the board, and the state engineer to facilitate the long-term sustainable use of South Platte water supplies.

In addition, and without expending additional funds, the institute shall evaluate and report its findings and conclusions to the board and the general assembly regarding:

> (i) to what extent augmentation plans are preventing injury to other water rights holders or potentially causing over-augmentation of well depletions;
>
> (ii) whether additional usage of the alluvial aquifers could be permitted in a manner consistent with protecting senior surface water rights; and
>
> (iii) whether, and to what extent, the use of water in the basin could be improved or maximized by affording the state engineer additional authority to administer water rights while ensuring protection of senior surface water rights.

Reporting

The institute shall prepare a final report, including its conclusions, and present it to the general assembly no later than **December 31, 2013**. The institute shall prepare a progress report and present it to a joint meeting of the House of Representatives committee on agriculture, livestock, and natural resources and the senate committee on agriculture, natural resources, and energy, or their successor committees, during the first regular session of the sixty-ninth general assembly in 2013. The institute shall present the final report to a joint meeting of the House of Representatives committee on agriculture, livestock, and natural resources and the senate committee on agriculture, natural resources, and energy, or their successor committees, during the second regular session of the sixty-ninth general assembly in 2014.

Scope of Work

HB-1278 calls for an investigation of high groundwater levels in the South Platte, in particular in several identified areas. The bill calls for review, analysis, evaluation, and conclusions using existing data. The study objectives necessitate well-calibrated and functioning models and a comprehensive network of groundwater observation wells to achieve the stated goals. However,

new modeling and data collection is not envisioned under the auspices of HB1278; nonetheless, the study must be definitive enough to support future decisions, or at a minimum provide guidance on additional efforts that must be completed to support such decisions.

The need for good science and transparency cannot be understated, must remain fundamental goals throughout the study, and should be applied to the following:

- clear identification of data sources
- understanding of data quality and completeness (or incompleteness)
- data analysis processes
- presentation of results

Data Collection, Organization and Display

HB 1278 specifies under item (c) The institute shall conduct the study independently using relevant, available, current, and historical hydrologic data and documents. The study must examine water use in Water Districts 1, 2, and 64 within Water Division 1. In conducting the Study, the institute shall consider the impacts to all water rights and interstate obligations in Water Division 1 and shall investigate, compile, and evaluate hydrologic variables and factors, including:

(i) the number and location of alluvial wells that are currently withdrawing groundwater;

(ii) the number and location of alluvial wells that are currently curtailed from pumping, either fully or partially;

(iii) the number and location of existing artificial recharge facilities and the historical volume of water recharged;

(iv) historical volumes of water pumped for each high-capacity irrigation, municipal, industrial, or other well not exempted under section 37-92-602;

(v) historical amounts of water leaving the state in excess of the requirements of river compacts and of the "Platte River cooperative agreement" of 1997;

(vi) historical water deliveries to surface water rights;

(vii) groundwater level data available from existing observation wells and the historical fluctuations of groundwater levels based on the data;

(viii) the South Platte decision support system's existing phreatophyte groundwater evapotranspiration module and, using available data, the relationship between high groundwater levels and nonbeneficial consumptive use by phreatophytes from 2001 through 2011;

(ix) the number and size of augmentation plans in operation in the study area; and

(x) the impact of transbasin supplies, reuse of fully consumable supplies, conservation practices, and the installation of lined storage facilities in the alluvium.