

# Report to the Kansas Water Authority On State Water Plan Fund Related Activities

by David Barfield, Chief Engineer, Kansas Department of Agriculture's Division of Water Resources  
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## 1. Interstate Water Issues:

### a. Republican River Compact:

#### i. Lawsuit over Nebraska noncompliance in 2005-2006:

- A. February 28: U.S. Solicitor General filed brief supporting our motion with the Court.
- B. April 4: U.S. Supreme Court issued order accepting Kansas' May 3, 2010 request to file suit and appointing William J. Kayatta, Jr. of Portland, Maine as Special Master. The Special Master has set an aggressive schedule for the case. Discovery commences May 16; briefs on key issues are due by June 15; depositions begin July 1; and Nov. 15 is deadline for Kansas expert disclosures and reports.
- C. April 27: Briefed Governor Brownback on the case.

#### ii. Colorado compliance pipeline: Ongoing negotiations between Kansas and Colorado over water delivery specifics, accounting, and other issues

#### iii. Compact operations: Kansas met April 15 annual deadline for data exchange between the states regarding 2010 water use; Colorado's and Nebraska's data were incomplete. Working on assignments from last year's compact meeting, preparing for next compact meeting in August.

### b. Arkansas River Compact:

#### i. Compact model update: Third expert discussion held April 27. Draft agreement being prepared to address irrigation efficiency improvements in model. Joint report due by May 19.

#### ii. Enforcement: With the restoration of state water plan funding for interstate water issues in FY 2011 and FY 2012, DWR has filled a vacant position in the Garden City Field Office, starting May 16, to double our enforcement staff; this is essential due to the scope of developments in Colorado that must be analyzed for impacts to state line flows, inspection of dry-up acres in Colorado, and other compact work.

#### iii. Stream/ditch gaging: Arkansas River gaging fund established in SB 124, pending signature by Governor Brownback. Royalties from the state's oil and gas leases in Hamilton, Kearny, Finney, Gray, and Ford counties (except from land controlled by Kansas Department of Wildlife and Parks), up to \$75,000 per year, are credited to the fund for operation and maintenance of Arkansas River gages. This will allow real-time, remote sensing of data to facilitate timely, accurate calls for compact releases and distribution of flows among the irrigation ditches.

#### iv. Compact operations: Completing minutes, following-up on assignments including review of complex Colorado water court decrees, and preparing for next compact meeting in December.

## 2. Basin Management:

### a. Models:

#### i. Equus Beds: DWR is collaborating with USGS in the development of a model for this easternmost lobe of the High Plains aquifer in south-central Kansas near Wichita. The model will provide a better accounting tool for Wichita's aquifer storage and recovery project, and is anticipated to provide more accurate estimates of natural recharge/safe yield of the aquifer.

#### ii. GMD 3: DWR is on the technical advisory committee for the model recently completed by KGS, and reviewed the model report prior to its publication by KGS in March. DWR plans to collaborate with GMD 3 in model runs to evaluate groundwater management options.

#### iii. GMD 5: DWR (through our contractor) completed and provided to GMD 5 a report on our peer review of the model, including suggested tweaks to increase confidence in the model results. DWR plans to work with GMD 5 to use the model to evaluate groundwater management options and safe yield in the district.

- b. IGUCA analyses:
    - i. IGUCA reviews: GMD 2 recently expressed agreement with our proposed IGUCA review procedures. We plan to initiate one or two IGUCA reviews in GMD 2 in 2011.
    - ii. GMD 4 high priority area: Over the past year or so, DWR has been collaborating with GMD 4 on possible approaches for enhanced management of groundwater within one of the district's high priority areas. Based on recent discussions, the GMD is tentatively planning to request an IGUCA to implement a water management strategy pending stakeholder and board approval.
  - c. Ogallala analyses:
    - i. DWR is examining different ways to quantify and illustrate the rates of decline, remaining supplies, and other parameters that may be useful in evaluating management strategies. We intend to post these maps and other work products after further work and peer review.
    - ii. DWR staff hosted a booth at the 3i show in Garden City, May 4-6, providing education and outreach on agricultural water use, hydrologic modeling, and groundwater issues.
3. Enhanced Water Management:
- a. Meter orders: DWR continues work toward the Kansas Water Plan objective of getting all nondomestic points of diversion metered (or other approved measuring device). Meter orders were issued February 23 for surface water rights within GMDs 1, 3, and 5 (deadline Dec. 31, 2011). Earlier meters orders are in progress for the Black Vermillion River and Big Blue River basins (deadline Dec. 31, 2011). DWR will conduct a public hearing June 29 for proposed amendments to state regulations requiring meters on all unmetered points of diversion within GMD 2 in a phased schedule (deadlines Dec. 31, 2012 through Dec. 31, 2015 for wells in NE, SE, SW, and NW quarter sections, respectively).
  - b. Flex accounts: With the severe/ extreme/ exceptional drought in western Kansas and higher commodity prices, we anticipate an increase in applications for multi-year flex accounts providing 5-year allocations. This will be facilitated by changes to the law (in SB 124, pending signature by Governor Brownback) relaxing the application deadline and allowing same-year applications.
  - c. Water Right Conservation Program: SB 124 also establishes application fees to provide for the resumption of WRCP enrollments. We will continue working with GMDs and stakeholders to update the regulations governing this program.
  - d. Compliance and enforcement: In calendar year 2010, DWR performed approximately 1,850 overpumping compliance investigations of which 437 were sent notices of noncompliance. Among the penalties issued were water use reductions totaling 1,564 acre-feet in 2011 to make up for overpumping in 2010 (some of the penalties are 1:1 and some are 2:1 depending on the number of repeat violations). The average cost of DWR compliance investigations (including all types, not just overpumping) is less than \$100 each.
  - e. GMD 1 closure: Regulatory amendments effective April 15 have officially closed GMD 1 to new appropriations of water in the unconsolidated aquifers known as the Ogallala and Niobrara formations within the district. While in most cases new appropriations could not be granted in the district due to safe yield rules, this change allows the district to benefit from voluntary incentive programs such as WTAP and the statutory due and sufficient cause for nonuse in closed areas.
4. Water Use:
- a. Quality-control data reviews, outreach and publication: Due to budget cuts, much of the work previously performed under a USGS contract is being handled in-house. Staff is reviewing and coding water use data reported by municipalities, and providing outreach to assist municipalities in making corrections if necessary. Staff will also assemble the QC'd data for the annual publication on municipal water use. DWR recently published the 2009 Kansas Municipal Water Use data online.
  - b. Online water use reporting: With restored funding in FY 2012, we are resuming the project to develop a system for online water use reporting. This has the potential to make reporting easier for water users as well as making data processing more automated and less expensive for DWR.
  - c. Remote monitoring: We continue to explore opportunities for remote sensing of meter readings, especially at impairment sites and other locations where water right administration may be necessary, and at hog facilities and other difficult-to-access locations.