SRBC Moves Foward With Ag Water Storage Proposal

HARRISBURG (Dauphin Co.) — Work is progressing on a proposal to store water in existing dams on the Susquehanna River and its tributaries for release during periods of drought on behalf of the state's production agriculture industry.

According to a recent publication of the Susquehanna River Basin Commission — a tri-state/federal compact that has authority over the regulation of flows in the entire Susquehanna River Basin — a 1995-developed water use proposal to purchase and store adequate water supplies to compensate for water lost because of consumptive uses by the state's agricultural sector appears to be proceeding well.

As background, in 1992 the SRBC proposed regulations that called for those who consume large quantities of water to either pay the SRBC for the storage of water lost, or to create water storage to be released during drought.

The proposal for agriculture was suspended until further study could be done.

The term "consumed" in this case refers to any act which changes the form of water from liquid to its gaseous state and then releases the gas freely into the atmosphere. (Water can be changed to a gas, as in steam-electric generation, and then recondensed to preserve it in liquid form.)

Such things as evaporation and evapotranspiration are consumptive uses because when water is changed into a gas form and released into the atmosphere, it generally does not stay within the basin, nor can it be recontributed to the river flow.

While this may challenge some of the more simplistic understandings of water cycles, consumed water is basically that which is removed from the flows of the water.

The cooling towers at Three Mile Island south of Harrisburg send large volumes of water from the river into the atmosphere. The nuclear electricity-generating plant operators pay SRBC a prescribed amount of money to compensate for the loss of water in the river.

That money is used by the SRBC to pay the U.S. Army Corps of Engineers for the storage of water in up-river reservoirs to be released during drought.

Over the past years, as the SRBC sought to consolidate its piecemeal regulations into a comprehensive and logical system, it held public hearings and received testimony from many farmers and landowners.

Though the issue of compensatory payments for consumptive water use has not been the main issue of those hearings, many landowners and farmers questioned why they should have to pay any amount to the SRBC for consumptive use in light of the fact that many of the operations of farms and some landowners have installed water and soil conservation practices on their land, and through keeping their land free of buildings and the soil porous, allow rainfall to seep into the ground and recharge groundwater aquifers.

At the same time, residential, retail and commercial developments, especially those installed more than 10 years ago, have been done so with minimal regard for the effects on groundwater.

Currently, local interpretation (the prescribed authority according to the late 1970s DER regulations) of effective storm water runoff controls and flood plain management has allowed less than desirable situations, as buildings require well-drained soils, and local expertise has been slow to develop.

Even as the more recent urbanization sprawl has occured throughout the basin, the older towns and cities and systems of storm water sewers continue to shoot storm water quickly toward the Chesapeake Bay.

Lawsuits and court interpretations of regulations, complaints from landowners seeking to continue the practice of draining land to create suitably dry building lots at the cost of recharging the immediate groundwater, and a general free-for-all for tapping into groundwater supplies have all allowed local problems to be exacerbated.

While the SRBC has authority to protect groundwater aquifers from being over-tapped, and general authority to regulate flows, it has been proceeding in a cautious manner.

Some politicians have expressed a desire to dismantle the hybrid governmental authority, because it is regional and actually is considered to be able to supercede state authority over some water flow issues.

As a compromise measure to individual farms being required to pay out for the amount of water consumed (used to irrigate, water animals, etc.), the SRBC has proposed that the entire basin's agricultural consumptive use be assessed and paid for through general tax funds.

Seeking to help agriculture to continue in the basin not only benefits the general population's economic opportunities, but it also ensures better water resource protections.

The SRBC Agricultural Water Use Advisory Committee approved the proposal in September.

The committee is comprised mainly of farmer-landowners.

Support was also issued by the Pennsylvania Farm Bureau, which stated to the SRBC, "We recommend the support of government-funded reservoir storage of make-up water to satisfy the SRBC consumptive use regulations for agriculture."

Currently, the SRBC has been encouraging farmers to register their water use, both for their own water-use protection, and for the SRBC to have a better grasp on water use within the basin.

There is no registration cost for agriculture and formulas are applied to calculate the amount consumed, versus the amount used.

Once the state's agricultural registered water use is completed, and the amount of agricultural consumptive use calculated, the SRBC can progress toward securing funding to support agricultural consumptive uses.

For more information, or to register use, contact the SRBC at its Harrisburg headquarters building by writing to it at 1721 North Front Street, Harrisburg, PA 17102-2391, or by dialing (717) 238-0423.

Steam Flaking Grains Can Have Benefits

NEW ORLEANS — Steam flaking of grains to gain more feeding benefits for milk cows has shown promise, according to a news release from the North American Region Animal Health Group of Pfizer Inc., and according to M.F. Hutjens, University of Illinois, in response to a letter to the editor in the May 25 issue of Hoard's Dairyman.

Both the Pfizer news release and the response by Hutjens refer to research done at the University of Arizona.

According to the news release, Dr. J.T. Huber, a professor in the Department of Animal Sciences at University of Arizona, "Estimated increases in income over feed costs resulting from flaking grains depends on milk and feed prices, and observed responses, but they have ranged from 20 cents to 40 cents per day per cow in the California market to 50 cents to $1 per day per cow in the Texas market."

In response to a question from a Hoard's reader about the price advantage to steam-flaked corn over regular corn, Hutjens referred to research done at the University of Arizona on steamed milo, qualifying his response that he did not have research data available on the effects of steam-flaking on corn.

Hutjens did express that there is a feeding and milk production benefit to steam-flaked milo and assumed that the response to steam-flaking corn would be somewhat less, but probably improved over dry rolling.

The Pfizer news release was based on a presentation made by Dr. Huber last week at the 44th annual Pfizer research conference held in New Orleans.

"According to Dr. J.T. Huber ... dairy producers now can design feed ration programs to improve milk protein yields by understanding the advantages of flaking, versus other methods of processing sorghum and corn," the news release stated.

In the response by Hutjens, he calculated a milk production benefit of $73 per ton; 56 cents per cow for protein (based on $1.83 per pound protein); 5 cents per cow for fat (based on 60 cents per pound fat); and 28 cents per cow for other milk solids (based on a 80 cents per pound value).

According to Hutjens, the Arizona-research showed a response benefit of steam-flaked milo over dry rolled milo of seven pounds in milk yield, a .31-pound increase in protein, and a .09-pound increase in fat production.

He calculated the per-ton benefit using a best-case scenario.

"This analysis is a 'best-case' scenario reflecting rations needing fermentable carbohydrate, containing modest levels of grain and a grain that is not as available in the rumen.

"You could see similar results with high-moisture corn, more finely ground grain, or substituting barley or wheat."

He added that, "Finally, all steam-flaked grain is not equal. It varies, depending on its processing and density."

According to the Pfizer news release, Huber said there has been widespread acceptance of feeding steam-flaked grain to lactating cows in Southwestern states.

The Pfizer research conference is the kickoff event for the annual American Feed Industry Association convention.

Other scientific reports that were to be presented this year include discussions on branched-chain amino acids in sow nutrition research, folic acid effects in broiler chicks, and the effects of small intestine digestion in regulating nutrients in ruminants.