

BRIEF SUMMARY: WSCAC THOUGHTS ON MWRA WATER SYSTEM ADEQUACY AND SERVICE EXPANSION POLICY

Our interest:

WSCAC's interest in the discussion of water system adequacy and of the policy governing system expansion is based upon our perception that reduced demand is miscuing communities outside the system, state water supply regulators and some of the user communities themselves to consider the system as having a surplus of water. Surplus usually denotes what remains when use or need is satisfied, or an excess of receipts over disbursements. (Merriam-Webster) We believe that ceasing to overdraw the reservoirs (in the 1980's) and instead increasing system dependability (in the 1990's) is a cue for kudos, and not a signal to increase the number of water using communities.

Some WSCAC concepts:

The concepts we use to explain our concerns seem less quantitative than the data filled material presented by MWRA staff or the revenue that can readily be calculated for each new million gallons sold. But in fact, our committee's concepts are also empirical, based on an understanding of the water system's behavior, state law and policy and resource management principles. Two ideas that our committee finds important are the degree of consumer response (and MWRA management) necessary for any given demand scenario; and two, the need to improve the quality of river reaches downstream of the reservoirs. Clearly the MWRA system uses less water than it did historically, but all uses and needs for the water are not yet satisfied.

System capacity:

A measure of system capacity cannot and should not be made once. It is an iterative process comprised of many variables, and requires some effort all of the time. Each iteration contains "yes-but" kinds of statements regarding not only the ability to provide water in each scenario, but the prospect of asking for community and consumer cooperation if trouble arises. The system response model required a good deal of staff effort and some of that effort will need to be sustained; predicting demand of current users and the future system itself is an evolving process, full of arguable ideas and the need for continuous monitoring of changing demographics both in the communities and in the availability of resources in the region; system operating rules affect reservoir transfers and treatment results, and are debated and tweaked continuously, impacting how much water remains stored in Quabbin; anticipating the need to utilize the Ware River source will need to be balanced by long-term water quality considerations versus a reduction in months of drought response if the river is fully used, rather than the recent more limited-use basis.

System reliability and a safety margin:

The system's reliability floats with these many factors. WSCAC has encouraged the MWRA communities to consider a reasonable safety margin on total demand. It limits the amount of water that could be sold (as a new inflexible base demand) before significant impacts to user communities take hold. The willingness of the user communities to reserve a safety net on demand

and to respond early when yield is diminishing contributes to the system's reliability. However, the MWRA communities can only protect their hard-earned system reliability if the Commonwealth honors its water resources policy that inter-basin transfer is a last resort measure, and courageously requires the highest levels of water use efficiency and water system management throughout the state, especially in those communities that lurk on the MWRA's periphery (all the while declaring that they never want to join the system - what we call the "Don't throw me in the Briar Patch" phenomenon).

Retaining a safety margin or cushion adds some assurance that demand on the system will avoid chronic voluntary drought response levels. The cushion needs to comprise an adequate amount of water for the natural growth of present users (set at the present date) and the many unknowns that WSCAC's position paper and the MWRA staff report noted: reservoir make-up water, treatment in the future, increased contract use among current partially supplied communities, and more.

The system model:

The system model now refined by the MWRA staff is dynamic, and is a good effort at avoiding dependency on the static concept of Safe Yield. If a specific historic yield, say 290 or 300 mgd, were truly 'safe' then the model would support doing nothing until the system was on the verge of exceeding it. But that is clearly not what the model's assumptions direct, nor would the current users be protected by that policy. The model's output shows the need for caution in future water use allocation, made quite palpable by reservoir response this year, although demand is low (so far the drought is intense but of short duration). Even a modest demand range of 240-255 mgd during a precipitation shortfall triggers at least voluntary demand management requests to the user communities for many months, to forestall entering the mandatory phases of drought response.

MWRA's responsibility:

MWRA can utilize policy, and its regulatory and contractual powers to ensure the future dependability of the water supply system. It can, as we have previously suggested, give teeth to its contractual arrangements, develop regulations regarding seasonal water uses and rates (we understand this would not be simple) and improve the eco-system characteristics downstream of the reservoir impoundments by making reasonable increases in releases, among other actions.

Finally, we continue to promote our concept about MWRA's task: MWRA's charge is to provide a water supply service. The service is not equivalent to the sale of a commodity --- as we have said, water is not fungible. MWRA is not charged with the sale of water as would be a business, but sells water as a way to fund the protection and management of water resources for the public health. MWRA was not empowered to harness new water sources, nor to own the sources it delivers.

Our perspective is that the first claimants to the water that flows into the MWRA/MDC reservoir impoundments are the streams from which it is withdrawn. Neither reservoir's downstream reaches receive adequate flow. The next entitlement is held by the present user communities, almost all of whom are outside the watershed basins. The latter legal entitlement carries a responsibility for efficiency and non-wasteful demand. There are no other claims or entitlements. New demands on

the system will carry consequences for all those currently served, by reducing system adequacy and reliability, unless the user communities control or reduce demand to accommodate new communities.

To strive for no negative impact, the seminal tenet of the system expansion policy, would be pointless, unless MWRA and its user communities take actions to ensure that this remains so.
(05/08/02)