WATER SUPPLY CITIZENS ADVISORY COMMITTEE
to the Mass. Water Resources Authority

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I. Preamble:

"WSCAC has always expressed a broad mandate for the proper management of all water resources in the Commonwealth. We have repeatedly emphasized two principles: preservation of sufficient instream flows for the health of our rivers, and demand management. We have objected to the plundering of rivers and aquifers for any use, in-basin or out-of-basin.

"We believe these principles should be applied to all basins, and all water sources, in the state, whether currently stressed or not. We believe that all the demands on a river must be considered objectively, including human use, fisheries, recreation, wetlands protection, and waste dilution….

"…Water conservation measures should be required whether or not water sources are currently stressed, as a matter of state policy. We believe that leak repair, full-cost pricing, metering and the other elements of state policy, lead to more efficient and less costly supplies."

The above quotations are from "Massachusetts Water Management Policy: Heavy Waters Ahead," a WSCAC newsletter issued in June 1991. These statements predated and helped guide the WSCAC responses to the 1992 Water Conservation Standards' revisions sponsored by the Water Resources Commission. These comments continue to apply to the revised water conservation Standards issued in 2005. Further comments appear below, but first a word about the Water Supply Citizens Advisory Committee.

WSCAC was established in 1978 to review the Long Range Water Supply Study and EIR- 2020, an enormous effort of the former Metropolitan District Commission to meet future water needs for the metropolitan-Boston water system (including some central and three west-central user communities). The volunteer committee is reimbursed for expenses including a staff and office and still focuses as its principle task on the Massachusetts Water Resources Authority and its milieu. Initially focused on a proposed increase in interbasin transfers to the metropolitan-Boston water system, WSCAC's first actions were to encourage greater efficiency in the water communities, especially through leak detection and repair, full metering, true-cost pricing, and public education. WSCAC members and staff have participated in many state conservation, drought, or policy statement ad hoc and formal committees and continue to discuss, review and comment on policies, law and regulation that affect the MWRA, other state agencies and the private sector.

MWRA's early responsiveness to WSCAC arguments against new interbasin transfers and advocacy for the potential savings in finding "new water" through higher efficiency (enhanced by the rising costs of sewer service) have led to dramatic reductions in MWRA's overall consumption figures. The reduced consumption is most dramatic in the so-called core urban communities, while the slightly more suburban towns are seeing increased summer outdoor uses, although base annual use also has declined, probably resulting from the implementation of the plumbing code and energy standards for appliances.

We note here, that even a system with MWRA's successes is subject to the pitfalls of attempts by the state to provide a single number or set of numbers for characterizing or limiting water uses. As example not found in these water conservation Standards is the DEP 1.2 summer to winter ratio, and a percentage for unaccounted-for water. In some communities, while demand has dropped significantly, unaccounted-for water has risen as a percentage of overall use. Although the MWRA communities use near or under 65 rgpcd, the range of such use is 47 rgpcd to 112 rgpcd, obviously the urban less lawn-intense communities are driving the numbers down.

Yet, we believe that setting numerical standards can be effective in moving communities in the right direction, so long as the pitfalls are recognized, discretion is possible when individual circumstances can rebut by good contrary information, and the state sincerely pursues through open review and debate new research findings, and commensurate standards. We believe that the state must finally fund a position for the conservation coordinator and provide the technical support to move communities in the direction of greater water use efficiency, including wastewater and stormwater management. The most difficult step will be to raise all communities to a level where planning is a meaningful activity – smaller communities will need more than guidance, they will need financial resources.

The state staff that worked with the advisory committee and wrote the conservation document have done a praiseworthy job. We want to acknowledge the work that went into this document although it has not prevented us from making some critical comments or asking for more.

II. Overall comments:

We expect the Standards to be used as goals for all and as approval and permit standards for Interbasin Transfer Act (IBTA), Water Management Act (WMA), state Revolving Loan Fund (SRF), and relevant MEPA EIRs. We want to encourage all communities to begin to adopt the Standards because the likelihood is that over time either permits or state monetary assistance will be requested and the Standards will be criteria in play. Adoption is especially important for communities whose basins are designated are overly stressed.

The document should contain in the introductory material a brief reference to the other state agency initiatives which will ultimately bear on the future implementation of these Standards: WRC's stressed basin designation initiative, streamflow task force initiative, DEP's water management policy initiative including an evaluation of the use of summer-winter water use ratios. The proposed revision to annual statistical reports for all water suppliers are an important underpinning of these water efforts.

III. Chapter by Chapter comments:

1. PLANNING: It was wise to move Planning out of Outreach. It is important to explain the various planning tools being required by the DEP and other agencies, but there still appears to be confusion over Comprehensive versus Integrated plans versus local water management plans required under the IBTA. This might be put in an appendix.

For lack of a better location, we add here the need for clarification of the two kinds of emergency actions available to communities in response to stress on water sources resulting from intermittent water shortages during low rainfall periods and other reasons. In an emergency from unanticipated deficit in a water system and to protect public health and safety a community may petition the DEP to invoke the emergency provisions of the WMA. However, communities need authority to enforce a drought declaration and should be approving such powers now. Communities also may adopt "a state of water supply conservation," as noted in Appendix F (Falmouth bylaw) and include private wells in the zone of influence of their water supplies.

Communities in stressed basins should be encouraged to adopt bylaws and ordinances as part of planning before drought strikes.

Further bylaw measures for towns could be to adopt a water-banking concept, specifically for any large project development or for subdivisions of a particular size or composition in primarily residential communities.

Appendix F could use better spacing – it seems a jumble!

2. WATER AUDITS AND LEAK REPAIR: This section has been changed badly. The most cost effective mechanism a water system has is its leak detection and repair program. Once-through every two-years has been the standard with many communities coming into line and should be the goal. Appendix B-1(p.36) says, leak detection survey every two years, and so did 1992 Standards. The only slack a community might get should be the elimination of repeating the full audit if UAW falls and stays below 10% - no magical number anyway.

We object to the proposed categories of uses which can be omitted from UAW water, especially "overflows", "misc. and non-revenue uses" and "bulkwater sales." Though they may indeed not be "unaccounted for" in the town's mind, they belong in the total and taking them out will encourage unrealistically low UAW totals and resulting sporadic leak repair. How does a system "confidently estimate[d] and document[ed]" "unknown miscellaneous uses and all other non-revenue uses?" Frankly this is utterly illogical. To further compound the squish that this might add, the Standards then carefully outline a complicated set of leak detection requirements based on the newly further-invalidated UAW water number. All flows that can be confidently estimated should be listed publicly in the system's reporting and the appropriately estimated figures should be totaled and shown alongside other UAW water. Towns should be discouraged from fudging numbers. Basing frequency of leak detection and repair on the quantity of UAW water encourages dishonesty in communities.

The schedule for repairing identified leaks also falls into illogic. The goal should be to fix all leaks immediately. However, some leaks in major roadways could be problematic – they are disruptive to repair but may undermine the roadway if they are not repaired. Obviously some flexibility and judgment is needed in these circumstances. After all, three gallons per minute (the proposed threshold) is more than 1.5 million gallons per year! Leak detection is a fine enough art at this point that major disturbance should be avoidable if leak detection is frequent enough to catch leaks early. MWRA's communities have become quite sophisticated in getting leaks found; and repaired every two-years near busy roads and its guidance might be helpful here.

The proposal for "field surveys" for water service lines once every five years needs further clarification.

A more serious concern needing clarification is the existing body of law cued by your suggestion to pass bylaws regulating water takings by riparians and agriculture. Such a bylaw should be subject to more extensive review before included here.

3. METERING: We agree with the goal of monthly billing. Quarterly should be the minimum. However, smaller communities will take some time in getting there. Boston is presently engaging in instant meter reads for all customers, and as we all know, the City's efforts have been exceptional.

All bills should translate, however, the 'cuft' measurements into gallons used and quarterly comparisons provided. The community should be able to provide some average household use figures also, so that customers can begin to gage their own household against others in their town. Page 11 includes the statement that meters should be made easy to read, like reading in gallons. It seems this would be expensive. The important thing to do is to make the billing of water/sewer use comprehensible and educational. I doubt that meter manufacturers will retrofit for gallons rather than 'cuft'.

All public water supply uses in a community should be metered, including all municipal buildings, facilities, sales to developers and projects, hydrants when flushed and recreational fields including town owned golf courses. Records of community use should be published in bills to consumers.

We have heard water suppliers denigrate this section because the smallest water meters are not "calibrated", they are pulled and replaced. The appropriateness of these meter sizes should be rechecked against an industry standard.

4. PRICING: Towns should be covering the full cost of operation, including the acquisition of interests in land, in fee or by CR, to protect water quality and quantity. However, the state should provide criteria such as those in the Watershed Protection Act to measure the significance of the land to the water system.

5. RESIDENTIAL USE: This section provides the clearest documentation to date of the origin of 65 rgpcd; however, an indoor use number would seem to have more agreement than a composite of indoor and outdoor water use. We hope that the research continues so that both numbers can be reliably established and that separate summer use standards can be developed. We suggest that a stronger focus on outdoor use restrictions may be more effective than adopting an indoor-outdoor number. If the state is unwilling to mandate stronger outdoor water use controls, then we would support the combined number as second-best. The problem of adding outdoor use to a total domestic use average is the wildly varying characteristics of residential lots from community to community. However, the differences can be managed not to some extent if the state requires the communities to adopt outdoor use controls across the board and then provides more stringent controls (see section 9 LAWNS) in the more stressed watersheds and basins: an example would be two day-a-week limited watering hours of 7 pm to 7 am, or such. Lawn-intensive communities of course must not be allowed to overdraft their own or regional resources, but these matters should be handled through WRC guidance and DEP's WMA discretion.

The Standards assume that everyone is clear on what a "residential water use" is. Since we understand that some water suppliers and consultants are working on a new definition to distinguish various uses that some towns think of as residential and others do not. We urge the completion of this process so that data that is comparable supplier to supplier. The urban mixed-use building further complicates defining the residential sector, often with commerce on the first floor and two apartments above. These buildings are not clearly one category of use or another and still often do not provide separate meters for each dwelling. What to do?

6. PUBLIC USE: All public uses should be metered including recreational fields and facilities, golf courses, schools, DPWs , municipal buildings. These water uses are non-revenue producing, but should be fully taken into account, assigned to the "costs" of running the relevant department, and be made public.

7. INDUSTRIAL USE: It is difficult to evaluate the illustrated BMP's in Appendix H. However, one set of BMP's conspicuously absent is a discussion of using dry-processing and cooling for large energy facilities, gas, biomass and so on. We realize that these may be more expensive, but the cost of resource waste is also significant. We do not believe the small municipal water systems can be asked to implement complex resource management standards if well financed industry cannot be held to the same standards.

8. AGRICULTURE: The Standards mention "irrigation BMPs." UMass extension might be able to help on these. It is not clear from the text whether there are any. There should be. Also mentioned are farm specific water management plans. Are you intending these to be added to plans prepared for farmers by the Natural Resources Conservation Services?

9. LAWNS: As state in our comments on Section 5, the Standards need to establish a stronger focus on outdoor use restrictions. The actions discussed to control such use lack bite. They are all good to know about and do but we do not hear the state committing to further code changes which will emphasize the negative impacts that outdoor uses are having across the state.

The Standards should tell towns to ban/require retrofit of sprinklers without moisture sensors, regardless of drought status, and not merely list good technology (p. 22) Rather than merely suggesting that owners and managers of recreational fields "should" be equipped with the "best available technology" it should be required, for example. Uncontrolled sprinklers cause no end of public anger, weakening conservation efforts. Golf courses are not specifically included—are they "playing fields"? Appendix F does not include a model as stated, except for the brief Falmouth section, and includes mostly web sources.

We absolutely support the suggestion to make private well users in Zone II "abide by" outdoor water restrictions. This action is probably easier than trying to ban such wells, although in stressed basins banning may make sense. Often, private wells are in a different stratum than municipal wells and so this issue is complicated by the unknowns of hydrogeology in any given area. Therefore, drought or conservation bylaws seem the most sensible approach.

Page 23 section 4. of the report mentions a prohibition on direct withdrawal from surface water for purposes other than agricultural irrigation (or of course fire-fighting needs). This kind of use must be reported and regulated by community conservation commissions and at high withdrawals by the water management act.

We support the licensing of irrigation professionals.

A final note on this section: the Standards should pick a few important items relating to outdoor use and make then compulsory with a deadline and then recommend that other best practices measures continue to be implemented. As it sands, the list is daunting and will not encourage compliance.

10. OUTREACH: Providing municipalities with the technical assistance to begin to achieve these Standards, before they are under a permit or approval "gun" is imperative. The Office of Technical Assistance will need additional staff and resources to begin the work of community education and assistance.

We emphasize the need for a state coordinator and the task of beginning immediately to educate municipal officials, not water managers, on the connection between water conservation, demand management, streamflow and the integrity of water resources in their basins.

Note of clarification: An early draft and the final drat of the state's proposed Water Conservation Standards were discussed at four WSCAC meetings and three executive committee meetings since May, 2005. The comments above are the result of the consensus process that WSCAC uses to come to positions or make comment. The comments do not reflect the opinion of each member. WSCAC meetings alternate venues and as such different members may be participants in any ongoing topic discussion.