



FOR THE ASSABET SUDBURY & CONCORD RIVERS

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Kathleen Baskin, P.E.
Director of Water Policy
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th floor
Boston, MA 02114

Re: OARS Comments on Sustainable Water Management Initiative Draft Framework

Dear Ms. Baskin,

Thank you for the opportunity to comment on the SWMI Draft Framework. In addition to our specific comments we strongly support the comments submitted by the Massachusetts Rivers Alliance. This letter will focus on a few specific aspects relative to our watershed. Founded in 1986, OARS is the watershed organization for the Assabet, Sudbury and Concord Rivers, and has over 900 members in the 400 square-mile Concord watershed. Our mission is to protect, preserve and enhance the natural and recreational features of the Assabet, Sudbury and Concord Rivers, their tributaries and watersheds. To learn more about our work please go to our website: www.oars3rivers.org. OARS also serves as Vice-Chair of the Sudbury, Assabet & Concord Wild and Scenic River Stewardship Council.

Based on our own data, review of other studies, and the excellent research done for the SWMI process, it is clear to OARS that significant change in state policy and regulation is needed to ensure the sustainability of the water resources of the Concord basin, comprising the Assabet, Sudbury, and Concord River watersheds. The draft Framework is a timely effort to achieve this. We support your commitment to the solid science that underlies the new Framework, in particular the stream flow classification system, based on a peer-reviewed study by the USGS and the Department of Fish and Game. OARS also supports the new stream flow criteria, and to the principles of improving flow-depleted streams, no backsliding, and mitigation commensurate with impact contained in the draft Framework. That said, we are concerned that the Safe Yield section of the Framework fails to follow a science-based approach and needs to be significantly revised to provide for sustainable water management.

Sustainable water use is essential for healthy communities, vibrant local economies, and recreational and wildlife resources. Our natural resources which are supported by rivers provide not only aesthetic beauty and enhance our quality of life, but also provide essential services such as flood control and pollution attenuation. Achieving sustainable water use will require a difficult balancing of interests. It is essential that this is done with the understanding that the condition of our river resources is likely to worsen with the anticipated effects of climate change.

The Assabet and Sudbury Rivers and their tributaries are clearly stressed in terms of natural flow; Nashoba Brook in particular is designated a highly stressed basin. If gages were put in place, many more of the tributaries would be so designated. During the summer and fall the Assabet has little base flow and, due to four municipal wastewater treatment plant discharges, can be up to 90% effluent. The Sudbury River has gone completely dry, as shown in the photo from 1999 below. Today (April 4) USGS gages show both the Sudbury and Assabet Rivers below their lowest recorded flow for this date. Tributaries to our rivers are currently showing low flows as well; clearly groundwater withdrawals from those areas could have serious impacts, especially in terms of the lifecycles of fish and other aquatic life.

This situation tells us that any water withdrawal falling under the Water Management Act must be scrutinized to ensure that it has no significant negative impact on the biological resources of these rivers and streams. Where a withdrawal is found to be exerting a negative effect, the withdrawal should be minimized, the effects mitigated, and the natural flow restored. At a minimum, no stream should be allowed to get *worse* due to water withdrawals, hence we strongly support the policy of no “backsliding” and ask that this be reiterated in the strongest possible terms in the Framework. We are pleased that much of the proposed SWMI Framework works towards putting in place a process to improve flow in depleted streams, and maintain flow in the healthier streams.

Specific comments:

Stream flow criteria. The draft Framework uses sound science to establish stream flow criteria; this now provides the information the state needs to manage water allocation so that streams have enough water to meet the seasonal needs for aquatic wildlife. This is an important step towards truly sustainable water management. Regarding the tiered framework that requires increased mitigation for increased withdrawals:

- OARS strongly supports the requirement to improve depleted streams (flow categories 4 and 5) by taking specific steps to minimize the impacts of water withdrawals. This will help restore urban streams and degraded streams in general. We support setting a goal of flow category 3 for all the flow category 4 and 5 streams so that degraded streams can be improved.
- We also support a requirement that any proposed water withdrawals that could affect streams that contain our most important natural resources consult with the Department of Fish and Game staff. This provides a mechanism for state staff with expertise in wildlife habitat to weigh in on permitting decisions.
- We also support a requirement that any impacts of new withdrawals must be mitigated with off-setting actions commensurate with impact. We suggest, however, requiring at least a 2:1 mitigation rather than a 1:1 approach given both the goal to improve conditions and the difficulty of ensuring that mitigation actually achieves its gallon-for-gallon goal. The impact of mitigation measures should be *measurable* and *reported* to MassDEP as a permit condition.
- We would like to see the state define “feasibility.” This term is vague and is too often used by project proponents to avoid requirements that they don’t like. If the permittee is unwilling to implement mitigation, MassDEP should deny the request for additional water.

Safe Yield. The SWMI Framework should be revised so that Safe Yield protects rivers from being depleted beyond ecologically-determined safe levels due to water withdrawals, and protects the sustained yield of water supplies. The state’s Safe Yield proposal doesn’t achieve either of these important goals because it is not based on the basic science of water resources. Because Safe Yield is calculated on a basin scale, it is completely inadequate at reflecting the impact on the sub-watershed level which is *where* most impacts actually occur. Further, since it is based on annual flows, it fails to protect water resources

when the demand is highest and natural flows are lowest. Thus it neither protects the rivers nor public water supplies.

Mitigation and unregulated withdrawals. We believe that it is important for the Framework to provide incentives, possibly through “mitigation” requirements, for towns to manage unregulated wells and surface water withdrawals. Clearly our drinking water resources cannot be sustainably managed by only considering the largest withdrawals and ignoring the many unregulated withdrawals that are growing in number every year. These unregulated withdrawals often draw from the same aquifers and collectively have the potential to significantly affect the same streams as the larger withdrawals. It is not coincidental that many of these “private” wells and surface water withdrawals are used for irrigation, a consumptive water use that specifically has the highest demand during the low-flow summer months and has thus been a focus of regulation under the Water Management Act. It would be very helpful if the Framework provided incentives for local bylaws or other mechanisms whereby communities can manage and regulate these wells and withdrawals. Without this means of backstopping local government efforts to manage the growing numbers of smaller withdrawals local authorities and town meetings come under strong local pressure to allow unimpeded private access to public water resources, thus undermining overall sustainability.

Crediting return flows. The Assabet and Concord Rivers both receive significant volumes of wastewater effluent through direct surface discharges regulated under NPDES. As noted above, the Assabet consists mostly of treated wastewater during low flow periods. Wastewater flows mask the continuing loss of clean, cold base flow from groundwater and from tributaries, yet carry heavy loads of non-regulated pollutants. The impacts of unregulated pollutants, including endocrine disruptors and other contaminants of emerging concern, are only just beginning to be understood. Groundwater discharge of treated wastewater, on the other hand, where properly designed, can benefit the water balance, aquifers and streamflow. We encourage providing credit for well-designed groundwater discharges of effluent (ensuring that pollutants do not reach drinking water or surface waters before being attenuated).

Implementation. The best regulations and policy will not be effective unless there are the resources to properly implement them. Due to the complexity of the natural systems addressed by this Framework and related regulations, we strongly urge the EOEEA to press for an increase in funding to MassDEP to support sufficient staffing for proper implementation.

OARS commends the EOEEA for its diligence in bringing the SWMI process forward and for its commitment to using science to inform environmental decision-making. We also recognize and appreciate the major contributions of the stakeholders involved in the years of consultation and analysis that has produced the draft Framework. If you have any questions, please don't hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'A. Juma', with a long, sweeping underline that extends to the left and loops back under the name.

Alison Field-Juma
Executive Director

Below: Photos of Sudbury River



Sudbury River at Fruit Street, Hopkinton--Dry condition photo is from 1999.