

March 27, 2012

Kathleen Baskin, P.E.  
Director of Water Policy and Planning  
Executive Office of Energy and Environmental Affairs  
100 Cambridge Street, Suite 900  
Boston, MA 02114  
*Via email*

**Re: *Massachusetts Sustainable Water Management Initiative Framework Summary***

Dear Ms. Baskin:

Thank you for the opportunity to provide comments on the *Massachusetts Sustainable Water Management Initiative Framework Summary* (SWMI Framework), released by the Executive Office of Energy and Environmental Affairs (EEA) on February 3, 2012.

The Nature Conservancy is an international, nonprofit conservation organization. Our mission is to conserve the lands and waters on which all life depends. Our work is carried out in all 50 states and over 30 countries and is supported by over 30,000 members in Massachusetts and over one million members worldwide. The Conservancy works globally on freshwater science and management to help government agencies, multilateral institutions, water management agencies, the hydropower industry, scientists and other non-governmental organizations around the world to improve ecosystem health and implement sustainable solutions. The Conservancy has been involved in the development and implementation of streamflow policies, laws and regulations across the country, including in Connecticut, Maine, and Michigan. For more information on the Conservancy's work, please see [www.nature.org/initiatives/freshwater](http://www.nature.org/initiatives/freshwater)

The Nature Conservancy welcomes the efforts of EEA agencies and staff to provide a public policy framework grounded in sound science to achieve the goals of providing sustainable water for our communities, our economy, and the environment. The Conservancy also greatly appreciates the efforts of EEA to promote dialogue among stakeholders and invite us to participate on the Advisory and Technical Committees.

We strongly support the establishment of science based streamflow standards to protect our rivers and streams and to help ensure we meet the water needs of our communities – both today and into the future. Our rivers already benefit from a variety of standards, e.g. water quality standards, stormwater standards, and road-stream crossing standards. *Science-based* streamflow standards will ensure we protect not only the quality of our state waters, but also the quantity of our waters. The new standards

will add clarity, transparency, and predictability to the existing permitting process allowing communities and other water users to know in advance to what standard they will be held. Such standards are a necessary step to help ensure we build *sustainable* communities by ensuring we make investments in water supply systems that are able to meet both the water needs of our communities and our environmental goals.

Many Massachusetts communities are already leading the way with innovative strategies to conserve water and manage their water use with nature in mind. To benefit the Ipswich River, Reading discontinued wells and Danvers structured development fees to provide funds for water conservation projects. Scituate leaders have restricted lawn watering to protect the First Herring Brook, and in Plymouth, developers worked to increase the amount of stormwater that returns to the Eel River.

Importantly, the SWMI Framework is based on the significant investment in research and analysis by the state and represents best available science – the results of which are consistent with similar studies across the country. The SWMI Framework is the result of over two years of public process that included participation from a full spectrum of interests and stakeholders. A clear, logical public policy framework is critical to a successful water management policy for the Commonwealth.

In order for the framework to be effective, EEA must include streamflow standards clearly within regulations that can be readily implemented and consistently interpreted throughout the Commonwealth. We recommend that the SWMI Framework be moved forward as soon as possible and in a logical sequence – thus we support a concurrent process of conducting pilot projects and releasing regulations for public comment.

We strongly support the SWMI Framework’s explicit focus on ‘aquatic habitat integrity’ (page 7, 1/27/12 Summary Document) as the goal for this framework. Fish communities are an appropriate surrogate of aquatic habitat health but it is important that the framework and the actions taken as a result of this framework continue to focus on protecting and restoring aquatic system health.

We recognize that many elements affect habitat integrity of aquatic systems. However, magnitude, duration, and timing of flows are perhaps the most critical elements to healthy aquatic systems. Often described as the ‘master variable’ for aquatic systems, water flows and levels are the primary driver of key natural process that support aquatic communities. Therefore, we support the focus on how to improve implementation of the Water Management Act (WMA) and benefit the integrity of aquatic habitats across the state. We also support that the Framework limits the responsibility of those who withdraw water to the impacts they cause and not for impacts beyond their control. The state and partners are engaged in efforts, from stormwater management to river restoration activities, to help address these other impacts. Comprehensive water management is an important goal that the Conservancy shares. And just as development of other water policies have been iterative, falling under a variety of jurisdictions—updating and improving these policies must also be iterative.

The WMA Permitting part of the framework includes some important new elements for the management of water in Massachusetts:

- Use of the best science to establish the flow and biological condition categories of our streams and application of these categories to help inform the level of protection required under the framework;
- Use of streamflow criteria as the basis for meaningful standards within a permitting framework of the WMA. Streamflow criteria will provide a clear articulation of the environmental needs of our rivers and streams as required under the WMA.
- Criteria and the associated permitting framework that provide a transparent, predictable approach to water management and permitting. Criteria will provide a customized permitting approach on a case-by-case basis based on an understanding of the site-specific impacts on flow.
- Protecting our highest quality streams (flow levels 1 through 3) which represent approximately 80 percent of the streams in the Commonwealth;
- Requiring that the impacts on our most depleted streams (flow levels 4 and 5) are minimized to the greatest extent feasible and that withdrawals on these streams evaluate and implement, where appropriate, 8 specific strategies to minimize their impacts, as described in the permitting framework.
- Requiring that impacts from new withdrawals be mitigated and that this mitigation be commensurate with the impact caused by these new withdrawals. Gallon for gallon measures are important, but alone may not fully meet the goal of protecting habitats so we support consideration of other measures that directly improve habitat integrity be evaluated in consultation with DFG and local stakeholder groups.
- Issuing all new permits with DEP Conditions 1-8 as standard conditions.
- Preventing a drop in flow and/or biological category unless there are other environmentally preferable alternatives. We encourage explicit terms under which MassDEP would determine whether there is no feasible alternative available and a flow category could be dropped.
- Using pilot projects to test issues related to implementation of the new Framework, such as exactly how the criteria would be applied to different systems, and how local data on hydrologic conditions and the health of streams can be taken into account to inform mitigation options.

The Conservancy strongly supports the research science used in the USGS Study (Armstrong et al 2010, 2011). The USGS Study is scientifically sound, founded in literature, and peer reviewed by independent, recognized experts -- some of the leading hydrostatisticians and hydroecologists in the country. The USGS Study provides the science necessary to understand how much water our rivers need to stay healthy across the state, and provides a benchmark of streamflow category and biological condition.

The USGS Study results should not be used as predictive modeling, but rather as a set of scientifically sound relationship between flow alteration and ecological response that inform a set of distinct policy decisions. The USGS modeling results are not being used to “predict” changes in category with increased withdrawals. Rather, the Biological Condition Gradient framework (Davies and Jackson, 2006) is a peer reviewed, published concept based on body of literature showing increasing degradation of aquatic health with increasing anthropogenic alteration. Sensitive species drop out first,

followed by more tolerant species; a few species remain in even the most degraded sites. One of the benefits of the USGS study is that it demonstrates a commonly understood relationship between aquatic life and flow using Massachusetts data. Most policy frameworks lack local studies of this caliber and rely primarily on broader literature reviews. Neither the model nor the Framework predicts species presence, abundance or richness at a site, and it is not the goal of this policy to ensure that a certain number of any species is present at a site.

The nature of science dictates that new information will always become available. New information can be used adaptively to refine and improve the standards as appropriate over time as we do with other environmental standards. We have the information necessary to act now.

In addition to the above key elements of the Framework that we support, there are elements we would like to strengthen:

- Adding criteria or statistics to protect the lowest flows across categories. Extreme low flow conditions are when some of the most severe impacts to aquatic habitat occur.
- The proposal for safe yield does not support the overall SWMI Framework. Calculating safe yield at basin scale does not provide water suppliers assurance of reliable supplies, nor does it protect water sources -- our rivers, streams and aquifers -- based on their size and relative watershed position. As proposed, the safe yield proposal is a missed opportunity to provide a solid backstop to our water management decisions.
- The proposal for baseline seems arbitrary and has the potential to allow backsliding outside of the strong Water Management Act permitting framework that has been developed. It establishes a baseline that is inconsistent with the biological and flow conditions established in the USGS study and the basis for the management framework. Baseline is the amount of water currently being used that defines what will be considered a “new” or “increased” withdrawal. The mitigation requirements will primarily be based on whether the request exceeds current use – defined as the baseline. The definition of baseline is therefore very important. We appreciate the importance of allowing for future economic growth, but this would be best accomplished by establishing conditions that focus new growth in places that can best accommodate it, and incentivizes wise water use, consistent with the goals of the Commonwealth’s Water Policy. At a minimum, the allowed increase should keep systems within their current category. A tiered system focused on reviewing the impacts of a requested withdrawal, rather than on changes in historic withdrawal levels would be preferable.
- We have some concern that the redundant well provision will allow the development of new water supplies that are not subject to the full requirements of the WMA. If a redundant well component is included we support that they only be allowed when they help address and existing environmental or public health problem and do not increase the authorized (or registered) amount available to the community.

Finally, we offer some suggestions for continued evolution of water policy in the Commonwealth. We would be pleased to offer assistance with these topics.

- Developing a formal policy for full inclusion of surface water beyond the transition rule. There is a body of literature to inform surface water categorization and management, (e.g., Freeman & Marcinek 2006, Kanno and Vokoun 2010) and examples of regulations from neighboring Connecticut.
- Developing a formal policy for crediting return flows. For the time being we agree it is appropriate to apply an interim rule using a case-by-case analysis. We encourage that MassDEP be transparent in considering trade-offs, including current water quality and the degree to which return flows will impact water quality in the receiving waters.
- The Conservancy hopes to see EEA eventually apply streamflow criteria across all of EEA's public policies on water resources and management. By linking the flows in rivers to the biological condition of rivers the science now forms a solid foundation for a water policy that can meet the needs of our communities and protect our rivers and streams.

The current Permitting Framework appropriately focuses on the impacts of water withdrawals on aquatic habitat. However, the Conservancy also supports reinvigorating watershed scale planning. Watershed Planning is a next natural step in a sustainable water management policy approach. A good example of the benefits of such planning is demonstrated in the Taunton River Watershed Plan which is informing multiple aspects of water management, including and beyond the regulation of water suppliers.

The Conservancy will continue to help ensure that the Administration and Legislature provide EEA agencies with necessary funding from state operating budget and capital resources to implement and manage the SWMI Framework and other vital activities. We also support the use of public funding and incentives to help water suppliers meet their goals of providing water for people and protecting the environment and thank the Secretary for the recent commitment of capital funds toward this end.

Thank you for your consideration of these comments. The Nature Conservancy looks forward to continued work with the Commonwealth to manage our water resources in a manner that meets our current needs and those of future generations. If you have questions, please do not hesitate to contact Mark P. Smith at [mpsmith@tnc.org](mailto:mpsmith@tnc.org)/617-532-8361 or Alison Bowden at [abowden@tnc.org](mailto:abowden@tnc.org)/617-532-8360.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne Klockner". The signature is fluid and cursive, with a large initial "W" and "K".

Wayne Klockner,  
Vice President and State Director