The Nature Conservancy
Protecting nature. Preserving life.™

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Water Management Regulatory Comment Box
One Winter Street, Fifth Floor
Boston, MA 02108
Attention: Elizabeth McCann
Via email, dep.talks@state.ma.us

Re: ***Proposed Amendments to 310 CMR 36.00, Water Resources Management Program Regulations***

Dear Ms. McCann:

Thank you for the opportunity to provide comments on the Department of Environmental Protection's (MassDEP) proposed amendments to 310 CMR 36.00, Water Resources Management Program Regulations.

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, 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.

These proposed amendments are an important step toward using the best new science to help us determine how much water we can withdraw from any one place and how much must remain in a river to ensure that it is a healthy, functioning river system, while providing sustainable water for our communities, our economy, and the environment. 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.

The proposed amendments include the science that tells us how best to achieve that balance – and quantifies the needs of the environment. Fish communities are an accepted indicator of aquatic habitat health and can be used as a surrogate to protect the full range of aquatic life native to Massachusetts' rivers and streams. One of the benefits of the USGS study (Armstrong et al 2011) 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.

In peer review comments to MassDEP, one of the world's leading environmental flow scientists, Dr. LeRoy Poff of Colorado State University, calls the work of Armstrong et al (2011) "of high scientific quality". The results of Armstrong et al (2011), and their use through the SWMI process, are completely aligned with the most recognized framework in environmental flow science – the Ecological Limits of Hydrologic Alteration (ELOHA) framework - which was outlined by an international team of scientists led by Dr. Poff. The ELOHA framework serves as a basis for "ecological water" science under the National Water Census (see http://water.usgs.gov/watercensus/ecowater.html) and is being used globally as the state-of-the-art in applied science (for more, see https://www.conservationgateway.org/ConservationPractices/Freshwater/EnvironmentalFlows/MethodsandTools/ELOHA/Pages/ecological-limits-hydrolo.aspx). 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.

These proposed amendments represent an update of regulations for the Water Management Act (WMA) – which was enacted into law in 1986. The original WMA was forward thinking as it required balance among different uses: public health and safety, economy, recreation and wildlife. We believe these draft regulations honor the legislative intent and the legacy of stewardship in the Commonwealth. The Conservancy appreciates that proposed amendments are designed to provide tangible outcomes: protecting our highest quality streams (flow levels 1 through 3) which represent approximately 80 percent of the streams in the Commonwealth; and 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, specific strategies to minimize their impacts.

The proposed amendments were developed through the Sustainable Water Management Initiative (SWMI). EEA, MassDEP, the Department of Fish and Game and Department of Conservation and Recreation spent over four years in an intensive effort to develop the SWMI policy and framework. SWMI provided an inclusive and transparent process for diverse stakeholders, including: water suppliers, municipalities, businesses, engineers, and environmental and conservation organizations. EEA also provided substantial support beyond the stakeholder process to, including $1 million in grant funding to pilot the SWMI policy and assist 11 communities with water conservation, demand management and other projects that will help to mitigate the ecological impacts of water withdrawals. And EEA is seeking $10 million in additional SWMI grant funding through the Environmental Bond Bill pending in the Legislature.

In 2012, the Water Infrastructure Finance Commission (WIFC) identified a $20 billion need for substantial investments in Massachusetts water infrastructure, and the Legislature is poised to increase the Commonwealth's commitment to water infrastructure. The proposed amendments enable better decision-making to ensure our infrastructure investment is done wisely. This is not a question of whether we spend money on our water systems, but whether we will make investments that will provide the long-term benefit that comes from using our water efficiently to meet our many needs. By promoting greater efficiency, SWMI will significantly reduce future capital costs in many areas, and incorporates a conservative "cost feasibility" test that ensures that even under the worst case scenario, costs to communities can't rise more than 2% per year due to environmental requirements.

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.

An updated approach to water management will improve the reliability of our public water supply systems by encouraging communities to build interconnections with neighboring municipalities and to use larger, regional water supply systems to ensure our communities have enough water available year-round. These new interconnections can provide access to important backup water supplies in case of drought or other emergencies.

The Conservancy supports retaining requirements in the proposed amendments that:

- New withdrawals above use in 2005 (+5%) must **mitigate their impact commensurate with impact**.
- The most flow depleted (categories 4 & 5 reaches) must take actions to **minimize existing impacts to the greatest extent feasible.**
- For a withdrawal that seeks to drop a flow category or a biological condition category they must demonstrate there is **no feasible alternative source that is less environmentally harmful**.
- All new permits include **MassDEP Conditions 1-8 as standard conditions.**
- **Outdoor water restrictions** would require more severe cutbacks during low flow periods (median annual 7 day low-flow).

The Conservancy respectfully offers the following recommendations for strengthening the proposed amendments. We would be happy to offer specific language regarding these suggestions, if helpful.

- **All withdrawals in the most impacted basins – groundwater withdrawal and seasonal categories 4 & 5 -- should be required to minimize existing impacts.** Currently the requirement to minimize existing impacts only applies to August groundwater depleted areas (36.21 (3)(a)(2)) and 36.22(5)(a)1. **Minimization plans should also be required for all depleted streams, including all category 4 and 5 seasonal depleted areas.**

- The draft regulations require that Permit Tier 3 withdrawal requests (those that will cause a drop in flow or biological category) demonstrate there are no feasible alternative sources that are less environmentally harmful (36.21 (3)(c)). Unfortunately, this excludes the most depleted basins (category 5) from this requirement because they, by definition, cannot drop a category (i.e. there is no category 6). **The regulations should clearly state that all category 4 & 5 waters, both groundwater and seasonal, should be considered as a Permit tier 3 and should be required to minimize impacts and demonstrate there are no other sources available that are less environmentally harmful.** This would ensure that both minimization and the no-feasible alternatives apply to these already- degraded waters is considered before any additional withdrawals are allowed.

- **The demonstration of 'no feasible alternative source that is less environmentally harmful' (36.22 (7)) should include the need to look for interconnections with other communities**. This agreement was part of the original 2012 SWMI framework and is vital to building robust water supply systems that include redundancy and ability to access other water supplies sources. This is vital to achieve important public health and safety benefits and to minimize impacts to natural resources.

- As mentioned, section 36.22(5)(a) requires minimization plans only for those basins with August (late summer) groundwater depletion. **The requirements for minimization plans should apply to**

all flow category 4 and 5 basins in any season. In addition the requirement to optimize use of withdrawal points (36.22(5)1) for all seasons where the basin is in category 4 or 5. This would be consistent with the language in sections 36.14 and 36.26 where impacts to any season are included.

- Currently the desired outcome of the "minimization plan" is undefined, and therefore results in uncertainty from an applicant as to what is expected. **Section 36.22(5) should state that the goal for minimization plans is to improve flows in category 4s and 5s (both seasonal and August) to achieve a category 3 flow, if feasible**. Category three is the lowest of the three acceptable levels of flow categories.

- **Surface water withdrawals seeking additional water should minimize impacts to category 4 and 5 basins (sec 36.21).** Currently the regulation only requires minimization when the surface water withdrawals affect cold water fisheries.

- **Withdrawals from brackish water (sec. 36.05(3)) should not be exempt from Water Management Act regulations.** Brackish waters often extend well up into river basins and are often some of the most productive and sensitive environmental areas. They are also, by their very nature, sensitive to water withdrawals that may change the salinity of these reaches or those downstream or upstream of where a withdrawal may occur.

- **Section 36.07(2) should include reasonable conservation measures within the list of partial options that may be considered for registered water withdrawals.** Many watersheds that are the most depleted (category 4 and 5), particularly those in eastern Massachusetts such as the Ipswich and Jones Rivers, are impacted by registered water supplies.

- **The safe yield calculation (36.13) as drafted does not ensure the reliability of water supplies nor does it offer protection of natural resources – both of which depend on the yield of water sources.** The primary problem is that it is calculated the scale of major river basins. To be useful as a management tool, the safe yields of 'water sources' should be calculated at the sub basin scale. In addition, safe yield should be quantified on a seasonal basis to ensure the safe yield is also protective of the natural resources that depend on water sources.

The Conservancy appreciates the efforts of the Governor, EEA and its agencies to develop these updated regulations, to promote dialogue among stakeholders, and for inviting us to participate on the Advisory and Technical Committees. 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.

Thank you for your consideration of these comments. If you have questions, please do not hesitate to contact Mark P. Smith, Deputy Director, North America Freshwater Program at mpsmith@tnc.org/617-532-8361 or Alison Bowden, Director, Massachusetts Freshwater Program, at abowden@tnc.org/617-532-8360.

Sincerely,

Wayne Klockner
Vice President and State Director