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April 6, 2012

Kathleen Baskin, P.E.  
Director of Water Policy  
Executive Office of Energy and Environmental Affairs  
100 Cambridge Street, 9<sup>th</sup> floor  
Boston, MA 02114  
*Via e-mail*

RE: Massachusetts Sustainable Water Management Initiative Framework Summary

Dear Ms. Baskin:

The Irrigation Association of New England (IANE) represents almost 100 member companies in Massachusetts. The Green Industry in Massachusetts employs 35,000 full time employees with a \$2.251 billion annual payroll. The Green Industry's \$3.8 billion total output represents approximately 1% of the gross state product. These policies will have a devastating effect on their employment and cause loss of jobs. These are not the economic times for this. The Executive Office of Energy and Environmental Affairs (EEA) should act responsibly and make sure that any regulations are based on accurate ground truth pilots before they are instilled as a permit requirement.

The IANE takes its responsibility of water use seriously. We have spent over \$50,000 in the last 5 years trying to get a "No Brainer" Bill through the Massachusetts Legislature. Our Bill **S.327-*An Act relative to water conservation*** a.k.a. the "Rain Sensor" Bill would require an irrigation system interruption device to be installed on every irrigation system (something that is not currently required) to shut off systems during precipitation events then go through a dry out period. IANE is also promoting **S.83 - *An Act relative to sustainable water conservation practices*** a.k.a. the "Registration of Irrigation Contractors" Bill to require professional installers to have a qualified knowledge of proper installation and water management techniques. Supporting these Bills will help with water conservation.

The IANE and the Green Industry hope to be a vital partner with water conservation groups through education of the end consumer being environmentally conscious and toward finding a balance in the availability of resources and efficient distribution to ensure healthy landscapes. It has been the Green Industry's focus to provide education towards alternative water sources, efficiency in design and installation using sensors, "smart" controllers, subsurface low-flow, highly uniform drip irrigation and proper scheduling as the tools to reduce waste, improper

distribution and conservation, while still allowing the homeowner, commercial entity or other managed landscapes, (golf courses, etc.) to survive. There are many ways to reduce outdoor water use without strict regulation. Many other states with much less water available than Massachusetts such as Florida, Nevada, Texas and Arizona have strict water use regulations that have reduced GCPD without harming the local economy or the environment. Massachusetts has made no effort to look at technologies or practices to reduce outdoor water use.

The importance of water to society has played a vital role throughout history to the quality of life, the settlement of civilizations, and the economy of these settlements. Many factors come in to play with the wise use of safe drinking water, the use of lesser quality waters and the environment in which they are situated. When we create broad-brush policies based on this use we need to take into consideration that these policies will exist into the future and how each affects consumers, the environment and economic development. The possible loss of vital resources due to over regulation needs to be taken into account.

Developing a policy for sustainable water management is certainly a necessity for our future. The questions revolving around the balance of being environmentally conscientious with the availability of resources are many. It is the belief of the IANE that the current approach toward establishing this regulation has been hurried; when it is more important to ground truth theories and complete pilot projects first; rather than write rules and regulations as the piloting commences and the results are unknown.

From the irrigation industry's perspective efforts have been focused on distribution and allowable withdrawals with conservation measures being defined as reduction or restrictions of "non-essential" watering. The IANE is of the opinion this perspective does not take into account the uniqueness of each withdrawal, the impact of that withdrawal on stream flows and the waste that one-day of non-essential watering will cause. We have many recommendations that will allow a balance that is economically feasible.

The simplest assumption and starting point for many evaluations of stream flow depletion from a groundwater withdrawal is to assume that groundwater is withdrawn at the maximum allowable withdrawal rate all the time and one hundred percent of the water is coming directly from the stream. This is rarely the case. In Massachusetts, as part of the permitting process, Induced Infiltration rates are determined during an initial pumping test. Each withdrawal is unique unto itself. Streambed calibrations should be over a period of time that captures seasonal and annual variations. Stream flow measurements may not be sufficiently reliable for low flows (<5 cfs) or for the high flows of a river. If there is disagreement with the specific tier a system is designated, the permit holder should be allowed the option of monitoring groundwater and or stream flows to directly measure stream flow depletion. While monitoring costs could be high, they may be less than the proposed mitigation costs deemed necessary by the wrong tier designation. This methodology is more accurate, and therefore more defensible, and allows the water user to develop and apply a customized approach.

There are elements of the proposed SWMI that completely discount the uniqueness of each withdrawal. Attached are hydrogeology reports of Induced Infiltration on withdrawals from Southwick and the effect on Great Brook; Westfield Wells 3 and 4 and Concord, final pumping test done in 2004. These are examples of how each withdrawal is unique to itself and how the direct impact on stream flows can be determined by desktop modeling, pump testing and water

quality data. It is the opinion of the IANE that once an impact is determined, customized monitoring of each withdrawal can be implemented and mitigation measures equal to impact can be determined.

The Induced Infiltration reports cited show two examples where there is little to no impact and one where there was a substantial impact on stream flow. The IANE believes that by utilizing information obtained in the original permitting process for each withdrawal the conservation measures necessary can be determined going forward. A society that doesn't take advantage of its natural resources where it can is at a disadvantage. If we create broad-brush policies that simply restrict usage when readily available data already exists that would suggest otherwise, the potential for this resource is not only under utilized, but also creates an unnecessary burden on ratepayers and consumers. This could result in valuable resources being lost to land development because the costs of developing the [these] underlying resources have dramatically increased. At some point society and regulators need to understand that developing a high-volume source of good quality water to comply with the Safe Drinking Water Act is limited to certain areas and these areas need to be protected. This should be high priority before these lands become developed and are lost forever, as is already the case in some areas of Massachusetts.

The IANE offers the following comments regarding specifics of the Sustained Water Management Initiative:

The SWMI frameworks lack of science-based analysis leaves many questions. The following questions need to be answered before regulations are written.

- Why does the framework focus solely on further regulation of water supply through the permitting process and not address an integrated water resource management plan that addresses the real environmental challenges and opportunities facing the Commonwealth?
- Why has more time not been taken to determine the association between water withdrawals and fish abundance and other significant items factored in including water quality and geography?
- Why has the model for the framework not been ground-truthed as part of the piloting to quantify fishery benefits? The cost of implementing mitigation measures without real life determination of improvements is not justified to ratepayers.
- Why has the Q90 monthly percentile for low flows been chosen for drought basin yield low flow determination rather than Q80, which is the generally accepted flow for rearing and growth in an antecedent period that is dry?
- Why is all outside water usage considered to be “non-essential”? It is not realistic to consider all outside water usage “non-essential.”

While development rules have come a long way to include pervious hardscapes, storm water returns and filters, and topsoil requirements, outside water is required to establish new landscaping. We need to take into consideration a balance of natural landscape and we need water to do that. It does not need to be safe drinking water and this is where the assumption that all water in the ground flows to streams is in error. Alternative water supplies (effluent water, rain water harvesting, gray water, cooling water condensate) can be utilized to some extent and

can be part of the solution. When we talk about water conservation what we really mean is using water wisely. A properly designed, highly uniform automatic irrigation system can also be part of the solution. By delivering just the right amount of water for the plants and/or turf's needs, we can create an efficient use of water. One day of "non-essential" watering is a policy that will lead to extreme waste and not allow the perceived benefit including damage to plant material. So many people will be watering at one time that it could cause stress on limited supplies. It would be better to manage non-essential watering through allotment. This will allow each operator to understand the limitations and proportionally allow it to be delivered in a specific manner suited for that system. New England soil conditions are such that by requiring one day of watering, most water will percolate through the soil by deep percolation, or create runoff that will cause water quality issues in waterways. IANE believes water quality issues in waterways are more of an issue than seasonal flows.

It is the American way to try to be as self-sustaining as possible. The individual withdrawal of a private well is also a unique withdrawal and in most cases has no correlation to permitted withdrawals. Where they do, a determination could be made as to how to interact with the best interest of all concerned. The homeowner should have the right to prove, just as the municipalities, that their withdrawal has little or no impact (if that is the case) to stream flow depletion. This can be done by desktop modeling or actual pump testing.

Baseline Determinations: If we are trying to determine sustained water management why is a baseline even necessary? At all flow levels, the standard of 65/10 have to be met or measures regarding their withdrawals have to be mitigated. The 65-gallon per capita goal is an extremely low figure and even EPA data shows the average water use per day per person is 100 gallons per day. Baselines leave no room for growth or development and may handicap a community that has planned on permitted withdrawals to balance residential and commercial/industrial growth. Based on other criteria of the SWMI the baseline should be done away with. According to MGL 21 G Section 7 "In adopting regulations establishing criteria for obtaining WMA permits the Department should assure at a minimum the following factors are considered." Reasonable protection of water uses, land values, investments and enterprises that are dependent on previously allowable withdrawals. Based on this increased withdrawals should be defined as increases above previous permitted volumes. Towns and water systems have huge responsibilities in planning an investment into a water supply that has planned for the future. To reduce permitted volumes means this planning goes to waste and promises made cannot be kept due to broad based outside regulations.

Calendar time lines for water restrictions: To just set calendar restrictions as part of a permitted withdrawal is not based on any scientific criteria. Water is a resource. The term "Finite Water" is often used as a technical term to define this resource. There is not one more or one less drop of water on this planet since the planet was born. The term that should be used is "a self-renewable resource." We may have more or less depending upon the weather and cyclical amounts of water availability. We should base the use of water on where we are in the hydrological cycle. Operators of Public Water Systems have to show a certain criteria of knowledge depending on how many customers are served. It is a huge responsibility to be an operator and no one knows better than he or she what the system is doing at that moment. Immediate decisions are often made depending on leaks, repairs to pumps, or well status as to what they can responsibly deliver at any given moment. Outside restrictions can be implemented, but these decisions should be left to the operator.

Developing a policy for sustainable water management, that goes beyond the needs and scope of the Water Management Act is an area that should involve representation from the business community that share the common objective of establishing Massachusetts as an example of cooperation between state agencies, environmentalists. Water purveyors, watersheds, non-profits and the true land stewards – business that design, install and/or maintain our landscapes using knowledge of and respect for natural ecosystems. For several years we have watched as regulators and environmentalists have portrayed the irrigation industry in particular, and to a lesser extent, landscapers that install turf and non-natives as the problem around declining water availability and triggers of waste.

Water should be looked at as a resource that can be taken advantage of when available. Budgets are determined by available water to be used and delivered. By lowering permit amounts and restricting “so called” non-essential water the cost burden is placed on the ratepayers as less revenue will be generated from less water sold. With aging infrastructure and increased mitigation costs, rates are going to become unaffordable. Towns will be pushing back for unfunded mandates. No one wants the rivers to stop flowing, but the need to base all water withdrawals on a worst-case scenario as opposed to average conditions like the State of New Jersey is just not intelligent policy. There are many more stakeholders that have not been involved in the discussion. It is time to slow down, prove the science, weigh the costs and benefits and open up the discussion to more people, especially the people who will bear the cost of these proposed rules and regulations.

Respectfully submitted on behalf of Massachusetts Members of the IANE,



Henry DeBoer

President

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Enclosures (10)

Cc: Governor Deval Patrick  
Secretary Richard Sullivan  
Assistant Secretary Philip Griffiths  
Commissioner Ken Kimmel  
Commissioner Mary Griffin  
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