

STATEMENT OF INTEREST OF AMICI

This appeal raises important issues regarding the management of the Commonwealth's water resources for all their uses. It presents a case of first impression involving the Water Management Act (WMA), G.L. c. 21G. The Court's decision will have an enormous impact on the "effective planning and management of water use and conservation in the commonwealth." G. L. c. 21G, § 3. Because water withdrawals reduce streamflows in rivers and streams, thereby impacting and at times eliminating, fish, aquatic habitat, and recreational opportunities, the ruling will affect river health, and the sustainability and uses of Massachusetts' water resources, now and in the future.

The *amici* non-profit conservation and resource stewardship groups (conservationists) and their members work to protect and restore the health of Massachusetts' rivers and streams, its fisheries, habitat, species diversity, water quality and recreational opportunities. Six organizations, Mass Audubon, The Nature Conservancy, the Jones River and

Eel River Watershed Associations, the Connecticut River Watershed Council, and the Merrimack River Watershed Council also own property along the banks of rivers and streams in the Commonwealth.

ISSUE PRESENTED

Whether The Water Management Act Authorizes the Department of Environmental Protection to prescribe conditions for registered withdrawals that are necessary for protecting the natural water environment and future water uses.

STATEMENT OF THE CASE

The Conservationists adopt the statement of the case as set forth in the brief of the Appellant Department of Environmental Protection (DEP).

STATEMENT OF FACTS

The Conservationists adopt the statement of facts as set forth in DEP's brief.

INTRODUCTION

Today, one of the "biggest challenges" facing Massachusetts "is maintaining sufficient quantities of streamflow so as to sustain ecological and anthropogenic demands." *Massachusetts Water Policy* (Executive Office of Environmental Affairs 2004) Add-74.¹ Streamflow is "[t]he amount of water in a brook, stream or river, measured as a volume passing a particular point over a unit of time. (Usually cubic feet/second)." *Massachusetts Water Supply Policy Statement, Summary Report* (1978) (Water Supply Policy Statement) at 7. Add-82. Adequate instream flow in rivers and streams is critical to sustaining essential ecological functions, providing aquatic and riparian habitat, maintaining water quality,² and meeting human

¹ References to the Addendum hereto will be cited as Add-__, according to page. References to the Record Appendix will be cited as RA-__, according to page.

² "[W]ater quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or . . . as a fishery." *PUD No. 1 of Jefferson County v. Washington Dep't. of Ecology*, (CONTINUED)

health and recreational uses.

River basins throughout the Commonwealth are stressed and many rivers, such as the Ipswich River, and tributaries, such as those to Charles River, experience extreme low flow conditions, or dry up, in the summertime when water demand increases and flows are already naturally low.³ The Massachusetts Water Resources Commission defines a stressed basin as one in which "the quantity of streamflow has been significantly reduced, or the quality of the streamflow is degraded, or the key habitat factors are impaired."⁴ *Stressed Basins in*

511 U.S. 700, 719 (1994). Low flows increase water temperature, decrease dissolved oxygen critical for fish, and increase pollutant loadings because there is less water available for dilution.

³ Water use increases dramatically in the summer months, primarily due to lawn and landscape irrigation. The United States Environmental Protection Agency (EPA) estimates that about one-third of all water used by large home households is used outdoors. The average lawn in the United States receives the equivalent of 145 days of indoor use by a single person per year. Tannenwald and Turner, *Water, Water Everywhere: Dare I Drink a Drop?*, New England Public Policy Center at the Federal Reserve Bank of Boston (2005). Add-91.

⁴ The Massachusetts Flow Stressed Basin map is reproduced in the Add-___. The *Stressed Basins' Report* and map are also available on line at: http://www.mass.gov/Eoeea/docs/eea/wrc/stressed_basins.pdf.

Massachusetts (2001) at 2. Add-86.

A report just published by the Division of Fisheries and Wildlife (DFW) under the aegis of the Massachusetts Department of Fish and Game documents the serious decline in riverine, or fluvial, species of fish across the state. Kashiwagi and Richards, *Development of Target Fish Community Models for Massachusetts Mainstem Rivers, Technical Report* (2009) (Technical Report). Of the 11 rivers analyzed for river-type fish, only one is considered to be in good condition, five are in fair condition, and five are considered to be in poor condition. *Id.* at iv. RA-99. Kashiwagi and Richards explain that the study's findings,

reflect considerable impairments to habitat. Impairment of some rivers appears to be driven by water quantity and physical habitat alteration while others are primarily driven by water quality. Many, however, are impacted by both measures.

Technical Report at v. Add-100.

As discussed in the *Massachusetts Water Conservation Standards* (2006) (Water Conservation Standards) at 3,⁵ which establish statewide

⁵ The Water Conservation Standards and the WRC's *Guide to Lawn and Landscape Water Conservation* (CONTINUED)

standards and recommendations for water conservation, “[p]lacing streams under chronic unnatural low-flow conditions can cause substantial harm to aquatic and other water-dependent organisms and habitats, and ultimately to our economy and quality of life through loss of scenic, recreation, and property values.” Add-107. Many public water suppliers are also finding it increasingly difficult to meet essential water supply needs for public health and safety. *Id.*

Ground and surface water are hydrologically connected in Massachusetts.

Groundwater makes a critical contribution to the surface water system, storing water during wet periods, and slowly releasing it during dry periods to maintain stream flows and reservoir levels. Thus efficient use of the Commonwealth’s water resources requires conjunctive management of ground and surface water.

Report of the Special Commission Established to Make an Investigation and Study Relative to Determining

(2002) are available on the WRC’s website at http://www.mass.gov/Eoeea/docs/eea/wrc/water_conservation_standards.pdf and <http://www.mass.gov/Eoeea/docs/eea/wrc/lawnguide.pdf>.

the Adequacy of the Water Supply of the Commonwealth, S. REP. 1826 (1983) (Special Commission Report, S. REP. 1826) at 4, 6. RA-53, 54. “[T]he basic hydrological fact of groundwater and surface water interconnection is now well understood, and must be the centerpiece of all water management policy.” *Id.* at 17. RA-59.

Withdrawals from groundwater wells located near surface water bodies deplete the surface water in two ways: by capturing water that would otherwise flow into the water body and by “inducing infiltration,” or drawing water from the water body into the well.⁶ See, e.g., United States Geological Survey, *Precipitation-Runoff Model for Analysis of the Effects of Water Withdrawals on Streamflow, Ipswich River Basin, Massachusetts* (2000) at 40.

⁶ Induced infiltration is the water that is depleted from surface water by the pumping of a well. It not only reduces baseflow, but it actually dries out the stream when the water table falls below the streambed. Baseflow is the water flowing into the river from groundwater, supplying the flow not provided by direct precipitation, snowmelt or runoff.

Add-120.⁷ Summing up the impact of withdrawals on streamflow depletion, the Massachusetts Water Resources Authority (MWRA) recently wrote:

In contrast [to the MWRA system], stream flow depletion elsewhere in the state is a growing concern, and detailed water quantity and quality studies have consistently documented that withdrawals from local sources of supply in certain river basins, or portions of river basins can contribute to a decrease in natural recharge and stream flow.

Frederick A. Laskey, "Staff Summary Re: MWRA Water System Expansion to MWRA Board of Directors," March 11, 2009, at 1. Add-121. Reservoirs for public water supply also adversely impact streamflow levels by diverting and impounding water that would otherwise flow downstream. See e.g. Postel and Richter, *Rivers for Life; Managing Water for People and Nature* (2003) at 14. Add-122.

⁷ The relationship between withdrawals and streamflow depletion was already known in 1983:

excessive withdrawals can lead to the depletion of groundwater, while replenishment of the groundwater from rainfall and percolation through the soil takes considerable time. Thus excessive withdrawals can outstrip supply and outpace the recharge process, leading to exhaustion of groundwater sources, reduction of interconnected surface water sources and, in coastal regions, to salt water intrusion.

S. REP. 1826 at 12.

Massachusetts has traditionally been considered a "water rich" state because it receives over 44 inches of rainfall annually. But withdrawals, existing water infrastructure and development have short-circuited the natural hydrologic cycle.⁸

"[A]s our demand for water increases with growth, and our infrastructure ages, some of our streams and lakes have become stressed and we are facing water supply shortages." Environmental Affairs Secretary Stephen R. Pritchard's Preface to Water Conservation Standards. Add-104. Because climate change will have profound impacts on Massachusetts' water resources, as discussed *infra*, at p. 40-42, the sustainable management of these vital resources has never been more pressing.

⁸ The proliferation of impervious surfaces - roads, buildings and sidewalks - prevents rainwater from infiltrating back into the ground and recharging aquifers. In Boston it is estimated that water lost to infiltration annually ranges from 43.9 billion to 102.5 billion gallons. American Rivers, Natural Resources Defense Council, and Smart Growth America, *Paving Our Way to Water Shortages (2002)* at 2; <http://www.smartgrowthamerica.org/DroughtSprawlReport09.pdf>. Add-126.

Municipal storm drain systems and regional wastewater treatment plants also alter the natural hydrologic cycle by transporting water far from its source, preventing local recharge.

SUMMARY OF THE ARGUMENT

I.

DEP may lawfully prescribe conditions on a renewal registration necessary for carrying out the purposes of the Water Management Act, G.L. c. 21G, § 1 *et seq.* (WMA). The legislature enacted the WMA against the backdrop of increasing concerns about water shortages. It recognized the need to manage ground and surface waters comprehensively and with maximum efficiency, given that water is a finite, but renewable, resource. The WMA creates this management framework and its legislative history highlights the importance of water conservation in meeting current and future water supply needs.

DEP and the Water Resources Commission (WRC) are given broad authority in section 3 of the WMA to protect the natural water environment while balancing competing demands on it. The WRC is required to adopt policies for "the effective planning and management of water use and conservation," which DEP is then required to carry out in implementing the WMA. *Id.*

DEP has always placed conditions on registered withdrawals. Sections 3, 5 and 6, read together and

in the context of the entire statutory scheme and its legislative history make it clear that DEP's role in registrations is intended to be substantive; historically, DEP has issued registrations statements and set conditions in them.

G.L. c. 21G, 6(5) expressly contemplates a program of conservation measures applicable to registrations. Nor does this conflict with the language in § 5, which provides only that a registrant can continue its "existing" withdrawal for ten years upon the filing of a renewal registration statement. Here, DEP's renewal specifically allows each registrant to draw up to its registered volume through expiration at the end of 2017.

Additionally, DEP properly promulgated 310 CMR 36.08, which explicitly provides that DEP may prescribe conditions on registered withdrawals. DEP promulgated these regulations in accordance with its statutory mandate to "establish a mechanism for managing ground and surface water in the commonwealth as a single hydrological system and ensuring, where necessary, a balance among competing water withdrawals and uses."

The statutory management responsibilities of the WRC and DEP relate to *all* withdrawals. Given that the majority of withdrawals are registered, the very purposes of the WMA would be thwarted if registered withdrawals are effectively exempted from any necessary conditions. (pp. 13-36)

II.

DEP's registration renewal conditions, aimed at reducing nonessential outdoor use, primarily lawn watering, in the summer when rivers are already stressed and water use peaks, and reducing water lost in the distribution system, are taken directly from the Water Conservation Standards adopted by the WRC. The Conservation Standards, which are intended to be used in implementing the WMA, require compliance "as soon as practicable." DEP has given registrants a generous ten years to comply; the seasonal demand management plans required only become operative if a drought advisory or higher is declared by the State Drought Task Force. If DEP had not included these conditions, it would have failed to carry out its duties and responsibilities under the WMA. (pp.36-42)

ARGUMENT

I. DEP May Lawfully Prescribe Conditions on a Registered Withdrawal Necessary to Carry Out the Purposes of the Water Management Act and the State's Obligation to Manage Water Resources Comprehensively and in a Sustainable Manner.

The appellee-water suppliers claim that existing withdrawals, registered when the WMA was enacted in 1986, can be used however each registrant chooses, without regard to the stress caused to the state's watersheds and regardless of whether those uses contravene the objectives of the WMA and its regulations, the Massachusetts Water Conservation Standards and state water policy. Neither the statute nor its legislative history supports such an antithetical result.

The water suppliers were authorized in this renewal to withdraw their registered volumes; however, it does not follow that the uses of this water cannot be properly circumscribed. DEP's registration renewal conditions are designed to reduce waste and nonessential outdoor residential use both in the summer months and during times of drought when the natural water environment is

already stressed. Water conservation is an important tool to ensure adequate water supplies to meet public health and safety needs, to promote Massachusetts' economic growth, and to protect the environment.

A. The Water Management Act Provides the Framework for the Comprehensive Management of Ground and Surface Waters in the Commonwealth.

The WMA was enacted because of concerns about the long-term viability of the Commonwealth's water resources. A severe drought in the mid-1960s, commonly referred to as the "drought of record," and other droughts in the 1970s and 1980s led to concerns about the potential for water shortages.

In 1977, the legislature established the Special Commission to investigate and study the adequacy of the state's water supply. Chapter 13 of the Resolves of 1977. The Special Commission recommended adoption of the WMA, a draft of which is attached to S. REP. 1826, recognizing that coordinated management of ground and surface water was critical.⁹ RA-53. It concluded that

⁹ The Boston law firm of Bracken and Baram prepared (CONTINUED)

the continued adequacy of the Commonwealth's water supplies can no longer be taken for granted. The [1978] Massachusetts Water Supply Policy Statement identified 155 communities as facing probable deficits by 1990. 76 communities suffered critical or potential water shortages at the height of the 1981 drought, and 46 communities remain on the list today, after nearly a year of bountiful rainfall.

S. REP. 1826 at 4.¹⁰ The Special Commission also recognized the critical role of water conservation in the new water management scheme:

a report entitled "The Groundwater Legal and Institutional Analysis," (1982) which is included in S. REP. 1826 and which contains a draft of the WMA. According to Bracken and Baram at 18-19,

Already some aquifers are overstressed and require special attention in any state water management program . . . DEQE does not have the necessary power to manage even overstressed groundwater aquifers, and certainly does not have the type of comprehensive management authority over aquifers in general that is needed to implement a total water management program.

¹⁰ The *Water Supply Policy Statement*, prepared by the WRC for the Executive Office of Environmental Affairs (now the Executive Office for Energy and Environmental Affairs, or EOEEA), was the "culmination of a major review of Massachusetts' water problems and policies. . ." *Supra*, at 3. Add-78. It concluded that "[I]n future years if all reasonable uses are to be accommodated, if resource and environmental values are to be protected, a new response in the form of managing demand will be required." *Id.* at 2. Add-77.

One obvious strategy to overcome actual shortages of water and reduce the threat of future shortages is to introduce methods of water conservation to manage demand and consumption of existing and new consumers at all times, rather than just when supplies are short . . . In any comprehensive water management program, conservation in all sectors - residential, municipal, commercial, industrial and agricultural - must be recognized as a principal method of meeting current and future water supply needs.

Id. at p. 39. (Emphasis added).

The WMA sets forth a program for statewide planning and management of all water resources by DEP and the WRC. G.L. c. 21G, § 3 ("The department and commission shall cooperate in the planning, establishment and management of programs to assess the uses of water in the commonwealth and to plan for future water needs").¹¹ It supplanted the common law of absolute ownership of groundwater. S. REP. 1862 at 45-55. RA-73- 78. Registrations are subject to continued regulation and oversight by DEP; the registration system does not grant a blanket "grandfathering" of these withdrawals.

¹¹ In addition the EOEEA Secretary "shall coordinate the activities and programs of the departments and divisions within the office." G.L. c. 21A, § 3.

The WMA creates the framework for managing the state's water resources to protect the natural water environment while balancing competing demands on the finite supply of water. Its enactment reflects the increasing concern for water supply adequacy, and as recommended by the Special Commission, initiation of statewide planning and management of water resources.

G.L. c. 21G, § 3, entitled "Planning and management of water use and conservation; advisory committee; regulations," specifies the individual and shared obligations of the WRC and DEP in carrying out the WMA.¹² Pursuant to section 3, the WRC is given extensive authority and responsibility for the management of the Commonwealth's water resources and for the administration of the WMA. The legislature instructed it to:

¹² As the Special Commission explained,

Responsibility for the Water Management Act would be shared by the Water Resources Commission, given responsibility for adopting principles, policies and guidelines necessary for the effective planning and management of water use and conservation in the Commonwealth, and DEQE [(now, DEP)], authorized to adopt regulations approved by the Water Resources Commission to implement the principles, policies and guidelines, and to administer the regulations.

S. REP. 1826 at 8.

adopt principles, policies and guidelines necessary for the effective planning and management of water use and conservation in the commonwealth . . . [they] shall be designed to protect the natural environment of the water in the commonwealth; to assure comprehensive and systematic planning and management of water withdrawals and use in the commonwealth, recognizing that water is both finite and renewable; and to allow continued and sustainable economic growth throughout the commonwealth and increase the social and economic well being and safety of the commonwealth's citizens and of its work force.

G.L. c. 21G, § 3 (emphasis added). These responsibilities correspond closely with the WRC's responsibilities and duties under its enabling legislation, G.L. c. 21A, §§ 8B and 8C.¹³

¹³ Pursuant to G.L. c. 21A, § 8B, the WRC is responsible, *inter alia*, for

(f) development and periodic updating of comprehensive water resource management plans for river basins, giving consideration to regional and statewide needs and to integration of wastewater management into water resource planning;

(g) development of water allocation criteria which takes into account demographic, hydrologic, and environmental characteristics; . . .

The WRC is also responsible for updating the Water Supply Policy Statement every five years. G.L. c. 21A, § 8C. The Policy, last updated in 1996, calls
(CONTINUED)

DEP is given broad authority for WMA implementation. Section 3 mandates, subject to the approval of its water resource management advisory committee and the WRC, that DEP

adopt regulations as it deems necessary to carry out the purpose of this chapter, establishing a mechanism for managing ground and surface water in the Commonwealth as a single hydrological system and ensuring where necessary a balance among competing water withdrawals and uses.

It also requires that "[a]ll regulations adopted by the Department pursuant to this chapter shall conform to, and implement, the principles, policies and guidelines established by the Commission under this section." Significantly, neither of these sections draws a distinction between registered and permitted withdrawals.

B. The WMA Registration Scheme Authorizes DEP to Establish Withdrawal Conditions.

Registrations, which may be renewed, are issued by DEP,¹⁴ and have always contained conditions for

for "aggressive implementation of water conservation measures by water users." *Massachusetts Water Supply Policy Statement, 1996 Update* at 2. RA-131.

¹⁴ Contrary to the Superior Court's finding, historically, a registration statement or renewal has required an application, which DEP reviews and issuance of the registration statement containing conditions by DEP. RA-139. (CONTINUED)

complying with the WMA and its regulations. G.L. c. 21G, §§ 5 and 6, read together and in the context of the entire statutory scheme (and the WRC's enabling legislation), clearly authorize DEP to impose necessary conditions on a registration statement.

1. G.L. c. 21G, §§ 5 and 6 allow DEP to condition registration statements.

G.L. c. 21G, § 4 authorizes DEP to change the withdrawal threshold volume for registered and permitted withdrawals and to lower the withdrawal threshold for any water source if it finds that the

DEP also has authority to enforce the terms of a registration statement. Under G.L. c. 21G, § 14, DEP

may issue such orders as are reasonably necessary to aid in the enforcement of the provisions of this chapter. The orders shall include, but shall not be limited to, orders modifying, suspending or revoking permits and orders requiring persons to cease any activity which is in violation of the provisions of this chapter or any regulation adopted hereunder. The department may, in its order, require compliance with such terms and conditions as are reasonably necessary to effect the purposes of this chapter.

(Emphasis added).

water source is in need of special protection.¹⁵ Under § 5, DEP is required to schedule expiration dates for filing registrations by "water source," defined in § 2 to include "a watershed where ground and surface water sources are interconnected in a single hydrological system." Sections 4 and 5 evidence the legislative plan of watershed management of withdrawals.

DEP is also required to limit initial registrations of existing withdrawals¹⁶ to no more than ten years, and section 5 allows for renewal of registrations. Assuming, *arguendo*, that regis-

¹⁵ If DEP lowers the threshold volume, it must provide an opportunity for persons making existing withdrawals from that source above the new threshold volume to file registration statements. G.L. c. 21G, § 5. Thus, the universe of registrants could expand to virtually all withdrawals regulated by the WMA, which according to the water suppliers, would then be exempt from any conditions.

¹⁶ Existing withdrawals are defined as "the average volume of water withdrawn from a particular water source during the five years prior to January, [1986]." G.L. c. 21G, § 2. These withdrawals were required to be registered with DEP; "new" withdrawals (those not registered in 1988) above 100,000 gallons per day require a permit from DEP. G.L. c. 21G, §§ 2, 5, 7.

tration statement conditions could never be altered by DEP, there would be no need for renewals.¹⁷

Pursuant to G.L. c. 21G, § 6, DEP by regulation "shall specify the form and required contents of a registration statement and the terms under which an existing withdrawal may be continued by a person other than the original registrant." The use of inclusive language here is significant. By specifying in § 6 that DEP's regulations shall "at a minimum" contain six criteria for registrations, it is clear that the legislature did not intend to limit DEP's authority to only those enumerated factors. Buttressing this is the expansive delegation of authority to DEP and the WRC set forth in § 3.

Additionally, § 6(5) expressly contemplates a program of conservation measures applicable to registrations. DEP's registration regulations must contain "Conservation measures instituted, or to be

¹⁷ It would also significantly undercut the WRC's duties to prepare and update "comprehensive water resource management plans for river basins[,]" develop "water allocation criteria" and update water policy at least every 5 years, as required by G. L. c. 21A, §§ 8B and 8C, if the same are not applicable to the great majority of water withdrawals -- the registered withdrawals.

instituted, by the registrant[.]” See also, 310 CMR 36.06(f). This section does not limit conservation measures to only those proposed by a registrant as the water suppliers may argue.¹⁸

The water suppliers’ claim that DEP’s authority to enact regulations for registrations is confined to those that are procedural in nature is refuted by the inclusionary language in § 6.¹⁹ Section 6 must also be read in conjunction with the imperative in § 3 that DEP’s regulations implement “the principles, policies and guidelines” established by the

¹⁸ Section 8, which authorizes DEP to adopt regulations specifying “the form and required contents of a permit application,” exactly parallels that in § 6(5), on “conservation measures instituted, or to be instituted, by the applicant.” G.L. c. 21G, § 8(9).

Following the water suppliers’ flawed reasoning that DEP merely “accepts” registration statements as submitted by the applicant to its logical conclusion, any conservation measures proposed by registrants themselves should have been included in the registration statements.

¹⁹ Section 5 further evidences DEP’s affirmative role in the registration scheme. It authorizes DEP to adopt procedures for recognizing as existing withdrawals volumes in excess of the average annual water withdrawn in the five years preceding passage of the WMA, however, it may not do so if “such volumes of water together exceed the safe yield of the water source from which the withdrawals are being made.”

WRC. G.L. c. 21G, § 3. DEP's conservations measures, as discussed *infra*, at 36-40, are designed to do exactly this.

DEP explained that it "evaluated including water conservation measures in the registrations that are consistent with the [2006] State Water Conservation Standards"²⁰ and it was including the water conservation measures in the December 2008 registration renewals pursuant to G.L. c. 21G, §§ 5 and 6 to "better achieve a balance between competing water withdrawals and uses mandated by the Act, to protect the natural environment, and to provide

²⁰ The Superior Court's reliance on *DEP's Water Management Act Policy for Permit and Permit Amendment Applications and 5-Year Reviews*, BRP/DWM/DW/P04-1 (2004), as the basis for DEP's renewal registration conditions is factually incorrect. RA-132. That policy and subsequent Guidance, see, # BRP/DWM/DW/G05-01, apply to WMA permits only and differ in significant respects from DEP's registration renewal conditions.

The registration renewal specifically states that

The Registrant shall comply with the 65 Residential Gallons per Capita Day (RGPCD) and 10 % Unaccounted-for-water (UAW) performance standards included in the Massachusetts Water Resources Commission's State Water Conservation Standards (July 2006) as soon as feasible but no later than **December 31, 2017.**

(Emphasis in original). RA-16.

continued and sustainable economic growth in the Commonwealth." RA-13.

Contrary to the water suppliers' assertion, the final sentence of G.L. c. 21G, § 5 does not support the conclusion that registrations cannot legally be conditioned. Section 5 simply provides that a renewal registration statement entitles the registrant to continue its existing withdrawals for ten years, and nothing more.

DEP did not reduce the initially registered withdrawal volumes in the renewals. See e.g., Fairhaven Water Department's renewal registration ("The Registrant is hereby authorized to withdraw up to the registered volume of water . . ."). RA-15, 21. While DEP cannot perhaps deny "a complete, properly filed renewal application[,]" unless the volume exceeds the available resources as determined by DEP, it does not follow that DEP cannot prescribe conditions on that withdrawal. RA-137.

Here, DEP circumscribed the uses of water through conditions aimed at reducing nonessential outdoor use, primarily lawn watering, during the summer months when streamflow is already low (and especially during drought conditions), as well as

through efficient distribution system operation. Although many communities today are not now using their full registered volumes, under the renewal registrations issued by DEP, they are able to withdraw their full registered volumes over the next ten years if new residential, commercial and industrial growth requires it.

The Superior Court errs in stating that the statutory history "suggests" that existing withdrawals were to be grandfathered. RA-137, 139.²¹

²¹ The Superior Court also relied on DEQE's "Water Management Act Registration Guidelines" (1987) Guidelines. RA-137-38. However, the agency's explanation that registration of an existing withdrawal "grandfather[s] the right to this amount of water to the registrant[,]" in the Guidelines at 2, does not conflict with DEP's registration renewal conservation conditions since in none of the case before this Court did DEP reduce actual registered volumes.

Moreover, DEP's regulations explicitly provide that 310 CMR 36.00 is intended to establish a program whereby withdrawals . . . are registered and regulated" by DEP. 310 CMR 36.02.

The withdrawal registration program is intended to provide a procedure and deadline for persons making existing withdrawals above a threshold quantity to file a registration statement with the Department. 310 CMR 36.00 is intended to enable the Department to document baseline water use in the Commonwealth and begin the process of comprehensive management of the surface and groundwater of the Commonwealth. *Id.*

The Court's reliance on a single sentence of S. REP. 1826, which explains only that permits would not apply to existing withdrawals, to support this conclusion is misplaced. RA-138, fn. 13. Directly following this, the Special Commission, summarizing the proposed WMA, states:

Thus the Act represents the minimum level of allocation regulation consistent with its management objectives. The resultant data gathering would enable protection of needs of existing users within the framework of comprehensive management of ground and surface withdrawals in Massachusetts . . . Essential features of the required regulations will be criteria, standards and procedures for registration of existing users and for issuing permits to new users.

S. REP. 1862 at 7-8 (emphasis added). RA-54-55.

This explanation further supports the conservationists' assertion that the intent was to give DEP an affirmative, substantive role in registrations.

By in essence arguing "first in time, first in right" regardless of the consequences to other users and uses of these finite resources, the water suppliers are trying to fashion the WMA into western water law which follows the rule of prior appropriation. Had the Special Commission intended

such a radical departure from eastern riparian water law, in which the vast majority of withdrawals would effectively be excluded from any meaningful regulation, it would certainly have highlighted, or at the very least discussed, this in its report.

While "the Legislature chose to treat existing withdrawals differently from new withdrawals[,]"the most important distinction concerns allocation of the volume of water safely available for withdrawal from a water source. Under the WMA's allocation scheme, registered volumes receive priority over permitted withdrawals for the finite amount of water available for withdrawal from a water source.²² RA-137. If the proposed permitted withdrawal alone, or in combination with other authorized withdrawals (registered and/or permitted), exceeds the safe yield of the "water source," DEP is prohibited from issuing a permit. G.L. c. 21G, § 11; 310 CMR

²² In recognition of the impact a new withdrawal could have on registered or permitted withdrawals from the same water source, DEP is required under G.L. c. 21G, § 9 to notify "all persons making withdrawals, pursuant to a registration statement or permit," of any proposed new withdrawal. Registrants and permittees may file oppositions to the proposed withdrawal. *Id.*

36.30(2)(a); 310 CMR 36.28(1)(j) and 36.30(2).²³

Considering this drastic result, it is inconceivable that the legislature could have intended that non-essential uses of water, such as lawn watering, by registered users would be given absolute priority over all permitted withdrawals for essential water uses from the same stressed water source.

²³ "The concept of safe yield is fundamental to the proper management of a water source, taking into account the natural variability of streamflow, and serves as the principal regulatory basis for determining the scope of permitted water withdrawals in a water source." 2005 Preface to "Revisions to the Massachusetts Water Resources Management Program (310 CMR 36.00)." Add-132. Safe yield is defined as "the maximum dependable withdrawals that can be made continuously from a water source, including ground or surface water, during a period of years in which the probable driest period or periods of greatest water deficiency is likely to occur, provided, however, that such dependability is relative and is a function of storage and drought probability." G.L. c. 21G, § 2. Safe yield sets a finite limit on the amount of water that can be withdrawn from a basin while protecting the interests in the WMA.

DEP has been ordered to develop a scientifically-sound method for determining safe yield and to apply it in the Ipswich River basin. *Town of Hamilton v. DEP and Ipswich River Watershed Ass'n v. DEP and Town of Hamilton*, "Memorandum of Decision and Order on Cross Motions for Judgment on the Pleadings," July 13, 2007, Essex Superior Court Dkt. No. 06-745, 1080 (Fahey, J.). Add-133. Although other aspects of the Superior Court's ruling were appealed and are pending decision in the Appeals Court, A.C. No. 2007-P-1980, no party appealed the Court's ruling on the issue of safe yield itself.

Under the plain language of §§ 5 and 6, read in conjunction with § 3 and the entire statutory scheme, DEP may legally condition registrations to achieve the goals of the WMA. DEP found that the prescribed conservation conditions were necessary for meeting those goals and properly included such measures in the registration renewals. The WMA, consistent with its historical background, evidences a purpose to enable and require statewide planning and management of the Commonwealth's water resources.²⁴ The legislative history supports the reasonable interpretation of the WMA that DEP may legally prescribe conditions for registered withdrawals.

2. DEP's regulations, which require registrants to comply with conditions imposed by DEP, are a proper interpretation of its authority under the WMA.

Some water suppliers conceded below that the regulations at 310 CMR 36.08 allow DEP to prescribe conditions on registered withdrawals, but argued that DEP's regulations exceed its statutory

²⁴ Statewide planning and management also make good sense because the use of water resources within Massachusetts will affect and be affected by the actions of adjacent states. See *e.g.*, *Connecticut v. Massachusetts*, 282 U.S. 660 (1931) (suit to enjoin the diversion of water from the Connecticut River for water supply in Boston).

authority. DEP's regulations specifically provide that "[t]he registrant shall comply at all times with any requirements and conditions imposed by the Department, M.G.L. c. 21G and 310 CMR 36.00." 310 CMR 36.08(1) (emphasis added).

Courts "grant substantial deference to an agency's interpretation of a statute" it is charged with administering. *Citizens for Responsible Environmental Management v. Attleboro Mall, Inc.*, 400 Mass. 658, 670 (1987); *Baybank v. Henry Bornhofft, Third*, 427 Mass. 571, 577 (1998); *Manning v. Boston Redevelopment Authority*, 400 Mass. 444, 453 (1987). Here, where the legislature has given DEP a broad grant of authority to promulgate "such regulations as it deems necessary to carry out the purposes of this chapter, establishing a mechanism for managing ground and surface water in the commonwealth as a single hydrological system and ensuring, where necessary, a balance among competing water withdrawals and uses[,]" deference should be given to DEP's interpretation of the statute through its regulations. G.L. c. 21G, § 3.

This is particularly true given that throughout §§ 5 and 6 DEP is required to adopt registration

forms, criteria, and procedures through its regulations. The legislature gave DEP, working in conjunction with the WRC, wide latitude in the WMA to effectuate its purposes.

Pursuant to 310 CMR 36.08(3), DEP may impose, "at a minimum," the conditions listed "upon the person submitting" a registration or renewal registration statement. *Id.* (emphasis added).²⁵ While conservation conditions are not explicitly listed in 36.08(3), the use of the phrase "at a minimum" clearly allows for additional kinds of conditions to be set by DEP. *A fortiori*, conditions incorporating the Water Conservation Standards, which in turn embody the WRC's "principles, policies and guidelines" are permissible. G.L. c. 21G, § 3.

3. The Agency has always placed conditions on registration statements.

The water suppliers concede that starting with the 1988 initial registration statements, the agency

²⁵ In addition, under 310 CMR 36.08(4), the registrant must provide "any information which the Department may request to determine whether cause exists for imposing conditions" upon a registration statement. Conservationists assert that even without this provision, it is always appropriate for DEP to request information when necessary for managing the Commonwealth's water resources.

has specified conditions. When DEP's predecessor agency, DEQE, issued a registration statement to the Fairhaven Water Department in 1990 it contained "Conditions and Requirements." RA-21. The Water Department was required to install source meters, to calibrate meters annually, and to keep monthly withdrawal records. *Id.* It was also required to file annual withdrawal reports.²⁶

These original registration conditions are neither exclusive, nor frozen for all time. To achieve its purposes, the WMA envisions ongoing active management of the Commonwealth's water resources, which necessarily entails adjustments to withdrawal conditions when it becomes clear, as is now the case, that the WMA's goals are not being met. Registration conditions should reasonably be expected to change over the course of several decades to conform to and implement new WRC policies and guidelines and to achieve the purposes of the WMA.

²⁶ All WMA registrants and permittees are required to file detailed Annual Statistical Reports with DEP documenting, among other things, their monthly and annual withdrawals by source, a breakdown of use by sector, and their residential per capita use and percentage of unaccounted for water.

C. The Purposes of the WMA Would Be Thwarted if Registered Withdrawals Are Exempt From Water Management and Planning Requirements.

The management responsibilities of the WRC and DEP under § 3 of the WMA relate to all withdrawals and those management responsibilities, both at the statewide and watershed levels, are mandatory. See also, G.L. c. 21A, § 8B(f) and (g) (WRC to develop and update comprehensive water resource management plans for river basins, and water allocation criteria taking into account "demographic, hydrologic and environmental characteristics"). The very purposes of the WMA would be thwarted if registered withdrawals are effectively exempted from state water planning and management.

Since registered withdrawals constitute about 85 percent of all withdrawals authorized by DEP,²⁷ a decision that DEP cannot prescribe substantive conditions that affect the uses of this water severely limits DEP's ability to "manag[e] ground and surface water in the commonwealth as a single

²⁷ DEP reports that 859 registrations have been issued and 348 permits. See, <http://www.mass.gov/dep/water/priorities/09swgw.doc>. at 29.

hydrological system, and ensur[e], where necessary, a balance among competing water withdrawals and uses." G.L. c. 21G, § 3.

The state's map of stressed watersheds, DFW's Technical Report on declining river fish, numerous United States Geological Survey reports documenting the impacts of withdrawals and other causes on streamflow, and the low and at times no-flow conditions across the state, all attest to the necessity of further conditions by DEP on registered withdrawals. Were DEP's 1988 registration conditions found to be static and unalterable, this will completely frustrate the purposes of the WMA. Absent clear language to the contrary, Court's will not interpret a statute in a manner that would effectively frustrate its purposes or produces an anomalous result. "Courts must ascertain the intent of a statute from all its parts and from the subject matter to which it relates, and must interpret the statute so as to render the legislation effective, consonant with sound reason and common sense." *Jeffrey Seideman v. City of Newton*, 452 Mass. 472, 477 (2008) (other citations omitted). See, also, *Flemings v. Contributory Retirement Appeal Board*,

431 Mass. 374, 375-76 (2000) ("If a sensible construction is available, we shall not construe a statute to make a nullity of pertinent provisions or to produce absurd results") (citations omitted); *Ruzicka v. Commissioner of the Department of Employment and Training*, 36 Mass. App. Ct. 215, 219 (1994) (court should "adopt an interpretation of the statute that harmonizes the statutory provisions").

II. DEP's Registration Conditions Implement State Water Conservation Policy.

The 2004 Massachusetts Water Policy, recognizing the enormous challenge of maintaining sufficient stream flow for both human demand and ecological requirements, declares that "[t]he impacts of insufficient water quantity behooves us to do our utmost to use water indoors and outdoors with maximum efficiency." Water Policy at 6. Add-74. "Addressing [water] quantity challenges requires . . . conservation efforts . . . [b]etter use pattern will help minimize the need to develop new sources of water supply." *Id.*

Exercising its authority under the WMA and G.L. c. 21A, § 8B, the WRC, in conjunction with EOEA, revised the State Water Conservation Standards in

2006. The 2006 Conservation Standards reflect Massachusetts' obligation to:

- 1) Preserve the Commonwealth's water resources as part of the public trust;
- 2) Sustain current and future water needs;
- 3) Protect aquatic ecosystems and minimize water supply impacts; and,
- 4) Provide financial savings in the cost of water.

Id. at 3. Add-107. The Water Conservation Standards are intended to be used in implementing the WMA and "all programs affecting the planning and management of the Commonwealth's water resources . . ." Water Conservation Standards at 5. Add-109. They are also intended to be adopted by all water suppliers and users. *Id.* at p. 6. Add-110.

All of the new conditions in the registration renewals are taken directly from the Water Conservation Standards. The Standards require public water suppliers to "meet or demonstrate steady progress towards meeting 10% UAW [(unaccounted-for-water)] as soon as practicable . . ." *Id.* at p. 11. Add-112. This water, "lost in the system," which in some cases can exceed 20 percent of the water

pumped, is an important measure of system efficiency.

The Water Conservation Standards also establish a residential use standard of 65 residential gallons per capita per day (RGPCD) to be met "as soon as practicable."²⁸ *Id.* at p. 18. Add-114. Because over 60% of all public water use is residential, "any improvements in residential water efficiency will result in significant water savings." *Id.* (emphasis added).

Because water use peaks in the summer as outdoor water use -- largely for lawn irrigation -- skyrockets, the Water Conservation Standards also require implementation of seasonal demand management plans (SDMPs), with outdoor water use restrictions tied to water supply and environmental indicators, such as low streamflow. *Id.* at 25. Add-117. The principle that in the hierarchy of water uses, water for lawns and landscapes (nonessential outdoor use)²⁹

²⁸ RGPCD is determined on a system-wide basis by dividing the total annual residential water use by the number of residents served by the system. It is not a *per se* household limit.

²⁹ DEP defines nonessential use as "uses not required for (a) health or safety reasons; (b) by regulations; (CONTINUED)

comes last -- after uses for public health, safety and the environment, is reflected in the Water Conservation Standards and the WRC's Guide to Lawn and Landscape Water Conservation. *Id.* at 25. Add-117.

In fact, DEP was extraordinarily generous in prescribing renewal conditions: suppliers were given ten years, or until registration renewal in 2017, to meet the 10% UAW and 65 RGPCD standards, although compliance plans for meeting these standards must be developed by the end of 2012.³⁰ DEP's SDMP guidance only requires registrants to restrict watering from May 1 to September 30 between 9:00 a.m. and 5:00 p.m. upon the declaration of a Drought Advisory or higher by the State Drought Task Force.³¹ Add-134.

(c) for the production of food or fiber; (d) for the maintenance of livestock; or e) to meet the core functions of a business." RA-17.

³⁰ A number of environmental groups moved to intervene in the registration renewal administrative appeals on the grounds that DEP's conditions are not in fact protective enough.

³¹ Environmental conditions will already be quite serious at the point a Drought Advisory is declared because groundwater levels must be below normal for two consecutive months and streamflow levels must be below normal for at least two out of three
(CONTINUED)

All of DEP's conservation conditions are aimed at efficient use of water and reducing nonessential water use to prevent the depletion of the Commonwealth's water resources. DEP would have been derelict had it not included conditions to achieve compliance with the Water Conservation Standards in the registration renewals.

This is particularly true given climate change impacts to water resources. According to the Northeast Climate Impacts Assessment (NECIA), a collaborative effort of the Union of Concerned Scientists and a team of independent experts, global warming will impact water resources through increases in the frequency of short-term droughts, increases by as much as five-fold in the number of extremely hot days (with increased water demand), increases in the severity of rainstorms, reductions

consecutive months to trigger a Drought Advisory. See, <http://www.mass.gov/Eoeea/docs/eea/wrc/droughtplan.pdf>.

If the registrant fails to meet the 65 RGPCD standard in the previous year, it must additionally limit lawn watering to one day a week when a Drought Advisory or higher is declared. Registrants with surface water reservoirs are not subject to these restrictions if they have a DEP-approved reservoir drought management plan.

in snowpack, a shorter snow season and increased winter precipitation, alterations in the timing and amount of streamflow,³² and raises in sea levels. Confronting *Climate Change in the U.S. Northeast* (2007) at 62.³³ Add-139. According to the NECIA report,

rising temperatures and changes in streamflow patterns could lead to decreases in water supplies during the summer and fall. Moreover, the timing of precipitation and the form it takes (i.e., snow or rain) strongly influences how much of the total precipitation is actually stored in surface waters and reaches aquifers.

Id. at 63. Add-140.

Droughts could occur as often as yearly and the length of the snow season may be cut in half by the end of this century. *Id.* at 63. Less snowpack will reduce high spring streamflows and the replenishment

³² The NECIA analysis projects more high-flow events in winter, earlier peak flows in spring, and extended low flow periods in summer (almost a month more under its higher-emissions scenario). *Id.*

³³ The full report is available at http://www.climatechoices.org/ne/resources_ne/nerepot.html. See also, *National Water Program Strategy Response to Climate Change*, (U.S.EPA 2008) at 8-17 available on the web at: http://www.epa.gov/water/climatechange/docs/T05_DRAFT_CCR_Revised_10-16.pdf; *The Effects of Climate Change on Agriculture, Land Resources, Water Resources and Biodiversity in the United States*, U.S. Climate Change Science Program, Synthesis and Assessment Product 4.3 (2008) at 121-150 at <http://www.climatechange.gov/Library/sap/sap4-3/final-report/default.htm>.

of groundwater, both of which help to sustain streamflow in the summer and fall. *Id.* at 63.

"[R]ising temperatures and changes in streamflow patterns could lead to decreases in water supplies during the summer and fall." NEICA Report at 63.

It is critical that DEP has the prerogatives that the WMA gave it as "comprehensive water manager and balancer" to condition all water uses to respond to these changing circumstances.

In sum, DEP is implementing the policies of the WRC and EOEEA by prescribing exceedingly reasonable conservation measures for registered withdrawals. These measures, intended to reduce outdoor use, especially during droughts, and to increase system efficiency, are necessary for protect water supplies, streamflow and habitat in rivers and streams, and to provide for economic growth.

CONCLUSION

For the reasons set forth above, this Court should affirm the conservation conditions in the water suppliers registration renewals issued by DEP on December 31, 2007.

Respectfully submitted

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CERTIFICATION PURSUANT TO MASS. R.A.P. 16

I, Margaret Van Deusen, hereby certify that this amicus curiae brief complies with the Massachusetts Rules of Appellate Procedure, including Rules 16(a), (e), (f), (h), 18 and 20.

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ADDENDUM