Response to Comment - Water Management Act (WMA) (M.G.L. c. 21G) revisions to regulations at 310 CMR 36.00 October 2014	
WMA Draft Regulations Comment	**Response**
MassDEP received over 165 written comments and oral testimony at six public hearings throughout the Commonwealth. The response to comments below is not intended to address every issue raised. The response below is to comments received from multiple reviewers, comments received on general issues not specific to individual permits or permittees, and comments on broad topics related to changes in WMA permitting. Thank you to all who provided input on these regulations.	
Procedural Concerns	
Extend comment period to 90 days.	The comment period was extended from 60 to 90 days. Comments were accepted until July 10, 2014.
MEPA Failsafe Review Safe yield needs a failsafe filing under MEPA, c. 30, §§ 61 and 62, to assure state actions minimize environmental harm.	MassDEP believes this comment is requesting a "fail-safe review" under 301 CMR 11.04, based on the MEPA review threshold at 301 CMR 11.03(12)(b)(1), i.e., that the safe yield proposal constitutes "[p]romulgation of new or revised regulations, of which a primary purpose is protecting against damage to the environment, that significantly reduce: … standards for environmental protection …." Because MEPA review is triggered by new or revised regulations "that significantly reduce … standards for environmental protection," MassDEP does not believe that a petition for review under 301 CMR 11.04 is warranted. MassDEP disagrees that the proposed regulations will be less protective of the environment than the current regulations. These regulations establish a clear method for determining the safe yield of each of the major river basins in Massachusetts, and they introduce the concept of streamflow criteria that will require permittees to undertake activities to address the impacts of their withdrawals based on seasonal streamflow conditions at a subbasin scale.
Preface to the Regulations and 2009 Clarification	
Preface The proposed amendments to the regulations delete the preface to the current regulations. Some commenters objected to the omission of the preface.	The Secretary of the Commonwealth's Regulations Manual directs agencies not to include prefaces with their regulations, so the preface has been removed.
2009 Clarification 2009 MassDEP Statement of Clarification of Safe Yield states that "safe yield under the Water Management Act includes environmental protection factors, including ecological health of river systems …" • Concerns that the Clarification fundamentally changed "safe yield" from the definition in the	The 2009 clarification statement will be superseded by these regulations upon their promulgation.

WMA, and a request was made that MassDEP rescind it.	
36.02 Purpose	
The proposed amendments to 310 CMR 36.02 inappropriately imply that protection of the natural environment must be balanced against "competing water withdrawals and uses." The WMA includes "protect the natural environment" (M.G.L. c. 21G, § 3 paragraph 2) as an independent purpose, not a subset of the "balance among competing water withdrawals and uses" (M.G.L. c. 21G, §3 paragraph 6) that MassDEP must achieve. The Attorney General's brief in *Water Dept. of Fairhaven v. Dept. of Envtl. Prot*., 455 Mass. 740 (2010), includes language: "to ensure balance among competing water withdrawals and uses so as to protect the resource itself, the environment, and future growth." The regulations should be amended to use this language.	MassDEP believes that 310 CMR 36.02 is consistent with M.G.L. c. 21G, § 3, when read in its entirety.
36.05 Exemptions	
Withdrawals of brackish or saline water should not be exempt from registration and permitting.	These regulations formally incorporate MassDEP's Policy on Salt Water Withdrawals (Office of Water Management (OWM) Policy 96-01) which has been in place for nearly 20 years. • The policy states "[w]ithdrawal from a virtually unlimited water source (the ocean) has been determined to have little potential for hydrologic impact on water management in the Commonwealth. The Department has determined that regulation of these withdrawals is not within the spirit of the Water Management Act, and should not be regulated under the Act." • For withdrawals in tidal reaches, MassDEP will make a determination on a case-by-case basis about whether a particular withdrawal requires a permit. The person making the withdrawal is required to submit salinity data for representative water samples taken according to protocols set by MassDEP and analyzed by a certified laboratory. 310 CMR 36.05(3) has been changed as follows: • The words "due to the influence of the ocean" have been added to 310 CMR 36.05(3) to

	clarify the waters to which this exemption applies; and • The description of the units of measurement used to define waters that are exempt has been corrected to "specific conductivity" rather than "salinity".
36.06 – 36.11 Registrations	
The permit conditions should not be extended to registrations Registered-only suppliers fear that MassDEP will at some point extend streamflow criteria and other permit requirements to registrations which will further decrease water use and the suppliers' ability to maintain infrastructure.	These regulations do not include any new conditions for registrations. MassDEP may revisit this issue in the future.
The permit conditions should be extended to registrations Applying conditions to registrations would • Level the playing field for suppliers • Protect basins from falling below safe yield • Remove incentive for public water suppliers (PWSs) to give up permits to avoid conservation conditions • Promote conservation	The primary focus of these regulatory amendments is on permitting requirements. MassDEP has decided not to extend permit conditions to registrations in these regulatory changes, but may revisit this issue in the future.
Ipswich Basin These regulations will have little effect on the Ipswich Basin because streamflow criteria and conservation requirements apply only to permitted withdrawals and most withdrawals from the Ipswich are registered.	Demand and impacts from many registered-only systems continue to decrease. Should registered-only suppliers increase withdrawals over their registered volume plus the threshold volume, they will be subject to streamflow criteria and applicable conservation requirements and water use restrictions through the permitting process.
The change to the definition of "existing withdrawal" and "new withdrawal" could allow MassDEP to accept registration of withdrawals that were not in existence during the registration period.	These two definitions are substantially unchanged from the previous version of the regulations, and are consistent with the statutory definitions. • Existing withdrawals are those withdrawals previously registered pursuant to the statute and regulations. All other withdrawals are new withdrawals. • The proposed revisions do not change the universe of withdrawals that were eligible for registration and the regulations do not provide a new opportunity to register withdrawals. The opportunity to register withdrawals closed in 1987 (1991 for voluntary registrations).
Annual report filings The provision at 310 CMR 36.11 stating that MassDEP may terminate a registration if annual reports are not	M.G.L. c. 21G, § 5, states "[e]ach registrant shall file an annual statement of withdrawal in accordance with the regulations adopted by the department. No person shall continue an existing withdrawal in excess of the threshold volume after the applicable deadline for filing registration

filed in a timely manner is overly harsh and water suppliers ask that it be removed.	statements unless such person has complied with the requirements of this section and the regulations adopted hereunder." The WMA regulations have and continue to require annual statements of withdrawal. The language of this provision is consistent with MassDEP's authority under the statute. The regulations do not require MassDEP to terminate a registration for failure to submit an annual statement. MassDEP will consider the totality of the circumstances and exercise its discretion accordingly.
MassDEP does not have authority to accept or reject registrations The new regulations define "registrant" as "any person who holds a registration statement accepted by the Department …." The commenter states that the act of filing established the registration and MassDEP cannot accept or reject it.	The statutes states that "[n]o person shall continue an existing withdrawal in excess of the threshold volume after the applicable deadline for filing registration statements unless such person has complied with the requirements of this section and the regulations adopted hereunder" and "[t]he regulations issued by the department shall specify the form and required contents of a registration statement …." MassDEP has authority under the statute to determine whether a registration statement filed with the department meets the requirements of the statute and its regulations.
36.13 Safe Yield	
Calculation of safe yield Comments were varied on the acceptability of the method for calculating safe yield set out in the regulations. Some commenters felt that • Safe yield should be calculated at a subbasin scale and should account for seasonal variability. • Safe yield will allow withdrawals greater than current withdrawals in numerous basins. Others felt that • Safe yield is consistent with the WMA. • Safe yield was not intended as an all-encompassing factor to determine water allocation. Many specific concerns are to be addressed through regulatory criteria and standards for obtaining permits (M.G.L. c. 21G, § 7).	MassDEP is charged with considering ten specific factors (M.G.L. c. 21G, § 7) when issuing permits for water withdrawals. Safe yield is one of the ten factors. Safe yield is defined in the WMA 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 period of greatest water deficiency is likely to occur; provided, however, that such dependability is relative and is a function of storage and drought probability." Other factors to be considered in issuing permits include: impact of a withdrawal on other sources; times of year when the withdrawal is made; protection of water uses, land values, investments and enterprises dependant on previously authorized withdrawals; use of the water and other existing or projected uses of the water source; any state or local water resources management plan; conservation and efficient water use; protection of drinking water, water quality, wastewater treatment capacity, waste assimilation, groundwater recharge, navigation, hydropower, recreation, wetlands, fish and wildlife, agriculture and flood plains; and economic development and job creation. Safe yield establishes a limit on permitted withdrawals based on allocated withdrawals per water source. The safe yield methodology in these regulations is based on an annual time step and on the major river basins in Massachusetts that are established by regulation by the Massachusetts Water Resources Commission.

• Incorporating all protections into safe yield will undermine effective water resources management and stop water supply development and redundancy and economic development.	While it is true that the safe yield calculation for certain river basins is above currently authorized volumes, there is no presumption or requirement that all water available within safe yield will be permitted. Proposed withdrawals will also be reviewed at a subbasin scale and seasonal timeframe using streamflow criteria, August groundwater depletion, and site-specific considerations before permitting decisions are made. Environmental protection measures focused on preserving healthy streams and fish populations are included in streamflow criteria and in the permitting process. The basin scale and annual time step for calculating safe yield are consistent with the registration information collected and process established for historic withdrawals by MassDEP when the WMA was first enacted. Prior to issuing permits, registered withdrawals are subtracted from the safe yield of each water source to determine the volume of water that is potentially available for permitting. MassDEP believes that through the use of streamflow criteria and other permit conditions, appropriate environmental protection will be afforded at the subbasin level and on a seasonal timescale while still maintaining public water supplies and other registered and permitted water uses.
45% set aside of drought basin yield What is the rational for the 45% set aside of water available in the "drought year" for environmental protection?	The USGS fish and habitat study (Factors Influencing Riverine Fish Assemblages in Massachusetts, Armstrong et al., 2011, USGS SIR 2011-5193, hereinafter "Armstrong et al., 2011") found a significant relationship between alteration of August median flows (Q50 flows), and relative abundance of fluvial fish (an indicator of aquatic habitat quality). Based on study results, the Sustainable Water Management Initiative (SWMI) participants determined that alterations greater than 25% were expected to cause significant impact. Staff looked at the volume represented by 25% of the Q50 for each month, and determined what percent of the monthly Q90 it represented. On average, 25% of the Q50 is roughly equivalent to 60% of the Q90. An additional protection factor of almost 10% was subtracted from the 60% of Q90 to result in 55% of Q90 as the safe yield. Because 55% of the Drought Basin Yield (annualized Q90) was determined to be the highest total volume of water that could be allocated, 45% of the flow in the river remains as protection against a drought condition on an annualized basis, so as to meet the statutory requirement that withdrawals not exceed the amount of water that can dependably be withdrawn. Maintaining 45% of the flow will sustain the health of the water source over the long term in order to ensure the availability of future withdrawals.
Safe yield should be calculated by USGS • Safe yield as outlined at 310 CMR 36.13 should not be promulgated. • Remove safe yield from the regulations. • USGS should be tasked with developing science-	See prior response for a description of the USGS-developed information that was the technical background for safe yield. USGS has been, and will continue to be, an integral participant in developing the technical information that underlies MassDEP's determination of safe yield.

based safe yields that protect the environment and the reliability of drinking water sources.	
Registrations no longer in use Registrations that are no longer in use should not be subtracted from safe yield when determining the amount of water available for permitting in a basin; registered water no longer in use should be considered available for permitting.	MassDEP will continue to count unused registrations against the water available for permitting within the safe yield of a water source because any volumes subject to a valid registration are available to the registrant and could be used at any time in the future. These regulations (310 CMR 36.27(4)(b)) provide that if a registered volume has been rendered effectively unavailable for withdrawal by the registrant pursuant to an agreement or order, MassDEP may include that volume when determining the volume of water available for permitting.
Reservoir storage • Water suppliers would like more credit for reservoir storage incorporated into safe yield. • The firm yields developed by the USGS using the Firm Yield Estimator Model for a number of Massachusetts reservoirs should be included in safe yield for the water sources in which the reservoirs are located.	The firm yield of individual reservoirs that do not provide multi-year storage during a drought year is not considered part of safe yield because MassDEP's safe yield methodology is based on the probable driest period. Reservoirs that do not provide multi-year storage may not be reliable during drought periods.
Delineation of Water Sources Concerns regarding the proposal to separate the Boston Harbor and South Coastal basins into multiple water sources. • Longstanding permittees with multiple withdrawals would be forced to apply for separate permits when previously only one was necessary. • Could trigger Interbasin Transfer Act requirements that have not been required in the past.	The proposed regulations at 310 CMR 36.13(3) state that "total registered volumes and currently permitted volumes for each water source will be published on the Department's website". Information posted for public comment at www.mass.gov/eea/agencies/massdep/news/comment included a draft chart titled "Safe Yield and its Components by Water Source", which included the safe yield determination, reservoir storage volumes, total registered volumes, and total currently permitted volumes for each water source and for subdivisions of the Boston Harbor and South Coastal Basins. After consideration of comment received concerning the complications of dividing some long-standing registrations and permits among multiple water sources, MassDEP has determined not to subdivide these river basins in this rulemaking. Water sources for the WMA program are established by regulation by the Massachusetts Water Resources Commission and any changes to basins would be done through amendment of the WRC regulations.
36.14(1)(c) Seasonal Groundwater Withdrawal Categories	
Seasonal streamflow criteria seem to have been developed by adjusting the allowable summertime flow by class to one level less – this is not supported by data or analysis.	Seasonal streamflow criteria were developed because of the need to maintain the natural hydrograph throughout the year. They are intended to maintain the magnitude and timing of the natural flow regime in instances where permitted withdrawals in a subbasin are substantially higher during times other than the late summer.

	Because natural streamflows are almost always at their lowest and water demands at their highest during the late summer, the percentage of streamflow taken for water withdrawals will typically be highest during August. The percentage of unimpacted August median streamflow that was withdrawn from each subbasin during the 2000-2004 period is used to set groundwater withdrawal categories (GWC) for each subbasin. Seasonal streamflow criteria are then set by determining the percentage of unimpacted median streamflow that is equal to August 2000-2004 withdrawals during the 4 other seasons (bioperiods of Oct-Nov, Dec-Feb, March-April and May-June) for each GWC. Seasonal streamflow criteria will guide permitting decisions only in the atypical situation where withdrawals are significantly higher during the non-summer months. Water withdrawals for snowmaking and winter flood-skimming to fill reservoirs are two examples of this type of withdrawal. Seasonal streamflow criteria will ensure that those withdrawals will not alter the seasonality of streamflows or harm the natural resources that rely on those seasonally high flows.
36.17 Effective Dates and Expiration Dates for Permitting by Water Source	
The length of permits in all basins should be 20 years, not the 15 and 16-year periods shown for most basins.	While Section 11 of the WMA specifies that permits cannot be longer than 20 years ("no permit issued under this section shall be valid for a term greater than twenty years"), the Permit Extension Act extended many of MassDEP's permits by 4 years. As a result, many 20-year WMA permits became 24-year permits. The dates set in 310 CMR 36.17 were chosen in order to reestablish the rolling permit cycle as it was originally set when the WMA regulations were first promulgated. In order to accomplish this, most basins will have a shorter permit period for their second or third renewal. The purpose of the rolling permit cycle is to help MassDEP manage the permitting workload.
Permitting Concerns	
Withdrawals requiring a permit Any withdrawal over the registered volume should need a permit.	M.G.L. c. 21G, § 7, states that "[n]o person may, after the effective date thus specified, make a new withdrawal of more than the threshold volume of water … unless such person obtains a permit …." New withdrawals are any unregistered withdrawals. Registrants making withdrawals greater than their registered volume are treated like any other person making new withdrawals and do not need a permit until their new withdrawal reaches the threshold volume for permitting. This has been the long-standing practice of MassDEP.
Surface water versus groundwater Surface water and groundwater are treated differently and thus these regulations do not consider them comprehensively.	Both ground and surface water withdrawals are evaluated for local impacts to other withdrawers and to local and downstream environmental resources. Both ground and surface water withdrawals must comply with standard permit conditions 1-8, including performance standards and outdoor water use restrictions.

	The USGS report (Armstrong et al., 2011) upon which the biological category (BC) and GWC streamflow criteria were developed did not include an analysis of surface water reservoirs or withdrawals, therefore, at this time surface water withdrawals cannot be evaluated using streamflow criteria.
Local Water Resources Management Plans Requirement to complete a Water Resources Management Plan is an important permit requirement of the WMA and should not be changed in these regulations.	The WRC's program for development and approval of Water Resources Management Plans was defunded and no longer exists. Because the plans could no longer be developed or approved by 1994, at its December 13, 1993, meeting, the WRC approved the following policy on Local Water Resources Management Plans: "For communities with a publicly-owned central public water supply system, the WRC considers a 'complete' local water resources management plan to be comprised of a completed DEM water supply questionnaire, and where applicable, a properly filed Water Management permit application or a Water Management permit. "Communities without a publicly-owned central public water supply system are deemed by the WRC to be in compliance with the Commission's local water resources management regulations until such time as the Commission issues planning guidance for these municipalities. For the purposes of Water Management permitting, these communities are deemed to have completed plans until such time as the Commission issues planning guidance." There is currently no guidance from the WRC on developing plans and no process by which the Commission approves plans. The change in these regulations was made to bring them into alignment with current WRC practice.
Local pre-application input Local advocates should be involved before an application is submitted.	At the start of each 20-year permitting cycle in a water source (see 310 CMR 36.17 for the permitting cycle dates), MassDEP will conduct outreach workshops prior to renewal application submissions. These workshops are open to the public, and local advocates may attend. Going forward, MassDEP has added time to the application review process so that information provided by all parties can be considered in developing permits.
Applicants' response to public comment In sections 310 CMR 36.23(6) and (7) and 36.29(2)(c) and (d), leave existing language which requires applicants to respond to "reasonable" comments.	310 CMR 36.23(6) and 36.29(2)(c) require applicants to respond to public comments "if requested by the Department." MassDEP has always reviewed comments received and asked the applicant to respond to comments related to the purposes of the WMA. MassDEP will continue to review comments and exercise its discretion to require applicants to respond to comments.
5-Year Review The proposed regulations at 310 CMR 36.31 no longer require a 5-year review.	The change to the regulations gives MassDEP the ability to conduct a 5-year review for any permit where there are issues to be examined or addressed. The review is no longer mandatory because of workload considerations. However, MassDEP has the authority to review permits throughout their term and take action as appropriate.

Performance standards and baseline compliance Fluctuations in water consumption are normal and, therefore, failure to meet the performance standards and baseline in any particular year is to be expected. MassDEP should use a 10-year rolling average as the trigger for performance standards and exceedances of a baseline.	MassDEP recognizes that communities must deal with annual fluctuations in residential gallons per capita day (RGPCD) and unaccounted for water (UAW), particularly in exceptionally dry years when RGPCD may climb as residents irrigate lawns and gardens more than usual. However, the nonessential outdoor water use restrictions are intended to provide protection to resources in the worst-case scenario. In addition, communities that have been out of compliance with the performance standards, but who make great strides and come into compliance, would face a disincentive to undertake those efforts with a multi-year rolling average for compliance. A 10-year rolling average would be counter to the goals of advancing greater system conservation and efficiency over time and addressing environmental impacts that have occurred since the baseline period.
Comment on Draft Permits Notice of all draft permits should be provided to all permittees in downgradient subbasins.	310 CMR 36.27(8) requires MassDEP to send notice of the availability of draft permits for review and comment to all registrants, permittees and non-consumptive users with withdrawals in the same subbasin, and gives MassDEP the authority to send notice to other persons making withdrawals in the same water source. Notice of draft permits will also be published in the Environmental Monitor.
36.03, 36.19 Baseline	
Who is responsible for identifying baseline, mitigation volumes, and wastewater adjustment volumes?	MassDEP will identify each permittee's baseline, mitigation volumes and wastewater adjustment volumes.
Concerns about baseline Many commenters objected to the concept of using water use between 2003 and 2005 as baseline for determining mitigation requirements in permitting. There were two ways that commenters suggested changing the regulations: • baseline should be deleted and mitigation should be required for all permitted withdrawals going back to 1985, because otherwise baseline "grandfathers" a second set of withdrawals that began between 1985 and 2003-2005. • baseline should be deleted and mitigation should be required only for increased withdrawals in excess of currently authorized permit volumes, because otherwise baseline	**Purpose and history of baseline -** The baseline concept was adopted to identify the threshold at which a permittee will be required to mitigate the impacts of increasing withdrawal volumes. MassDEP adopted a permitting policy in 2005 that required permittees to "offset" increasing withdrawals. That policy established a 3-year baseline period, similar to that developed and used in the SWMI framework, which identified when "offsets" would be required. Originally that baseline period was a moving 3-year window immediately preceding the permit renewal or 5-year permit review. When the 2005 policy was adopted, concerns were raised that it created a disincentive to implementing conservation measures until required by a renewed or modified permit (i.e., keep use high to keep baseline high). Concerns were also raised that using varying years would result in different requirements for permittees because of differing climatic conditions (i.e., dry years would result in higher baselines because of outdoor water use and wet summers would result in lower baselines). MassDEP decided to standardize the baseline period at that time, and after reviewing the precipitation records for the 2003-2005 period, decided those years represented a reasonable baseline period. Appreciating that the already adopted baseline period (2003-2005) overlapped with the 2000-2004 period used in the USGS streamflow studies, staff analyzed water use data between those two periods and found that they were comparable. Aligning the baseline period and the study period

penalizes permittees for conservation and system improvements put in place prior to 2003-2005 and for growth since 2003-2005.	meant that the study period reflected baseline water use. **Baseline parameters -** Baseline in these regulations reflects a careful mix of: • statutory limitations (baseline cannot be less than a withdrawer's registered volume); • compliance (baseline cannot be more than the volume that was authorized for a permittee during the 2003-2005 time period even if a permittee actually withdrew more); • a small buffer up to 5% for permittees who withdrew less than their 2005 authorized volume; and • efficient water use moving forward. Baseline water use is not automatically permitted. When a permit is renewed, the authorized volume cannot exceed a permittee's 20-year water needs forecast based on meeting the 65 RGPCD and 10% UAW performance standards even if the permittee's baseline is higher. Should the permittee's water use rise above the 20-year forecast thereafter, baseline would still be based on 2003-2005 water use.
5% buffer should not be added to baseline. It could allow "backsliding" in some subbasins that would otherwise be addressed by mitigation requirements.	**5% buffer and the "no backsliding" goal -** An analysis of the potential for backsliding due to the 5% buffer showed that approximately 5 subbasins out of 1395 might be affected. MassDEP is aware that some suppliers with strong conservation programs feel baseline penalizes them for their efforts prior to the 2003-2005 baseline period. The 5% increase in baseline provides a buffer for those that implemented good conservation or infrastructure maintenance practices prior to or during the baseline period and therefore withdrew less than their authorized volume during that period.
36.19 Determining Permit Tier for an Application	
Tier Designation for Permittees Withdrawals made from subbasins designated as GWC/BC 5 should be Tier 3 withdrawals and applicants should be required to identify all feasible alternatives.	The determination of permit tiers in permitting has been extensively reviewed and vetted as part of the SWMI Framework and as these regulations were developed. In cases where there are unique concerns or particularly sensitive resources that require additional consideration, MassDEP has authority to request additional information from the applicant and to impose conditions it deems necessary to further the purposes of the WMA.
36.20(4) Site-Specific Fish Community Assessment	
<u>Site-Specific Fish Studies</u> • Tier 2 and Tier 3 permittees should be provided an opportunity to conduct a "Site-Specific Fish Study" that would allow them to refute the category designation of their subbasins if the observed local fishery is more robust than predicted by the SWMI model. • Anyone, not just the permit holder, should have the right to submit fish studies.	MassDEP, in consultation with the EEA agencies, limited the option of doing a site-specific fish community assessment to Tier 1 applicants seeking a withdrawal in a subbasin having more than 25% August net groundwater depletion. The fish study provides the applicant with the opportunity to demonstrate over a 5-year monitoring period that the fluvial fish relative abundance in such subbasin exceeds the expected number of fish for the groundwater withdrawal category (GWC) applicable to the withdrawal. If MassDEP, in consultation with the EEA agencies, determines that the applicant has met the above measurement standard, the applicant will be relieved from implementing the minimization measures otherwise required by the WMA regulations. The main reason for limiting this option to Tier 1 applicants is that, unlike Tier 2 and Tier 3 applicants,

	Tier 1 applicants are not requesting an increased withdrawal above baseline. This allows for an evaluation of the fluvial fish relative abundance based on the effect of the existing withdrawal on the subbasin. The additional mitigation requirements that Tier 2 and Tier 3 applicants are subject to are triggered by their request for an increased withdrawal over their baseline. The fish study described in 310 CMR 36.20(4) is not designed to measure the future impact of an increased withdrawal by a Tier 2 or Tier 3 applicant on fluvial fish relative abundance. Increased withdrawals may have future impacts on fish populations, and so a demonstration of present day actual fluvial fish relative abundance will not relieve applicants of mitigation requirements. To expand the fish study option to applicants requesting Tier 2 and 3 withdrawals would allow such applicants to increase their withdrawals without any upfront assessment or determination of the impact on fluvial fish abundance in the affected subbasin, which would be contrary to the objectives of this section of the WMA regulations. As a general matter, the regulations do not prohibit any applicant or other person from conducting fisheries assessments or other environmental assessments and providing that information to MassDEP for consideration in permitting decisions. However, any such assessment will not alter the category designation of any subbasin or the permit tier designation of any permit application. Instead, MassDEP may use this type of information more narrowly to inform its determination of the most effective optimization and mitigation approaches for permitting.
Fish Sampling Protocols All protocols that will be required by the Massachusetts Division of Fisheries and Wildlife (MassDFW) for site-specific studies should be included in the permitting guidance.	310 CMR 36.20(4)(c) sets forth the procedure and requirements associated with a site-specific fish community assessment, including the requirement that the assessment be conducted in accordance with a fish sampling and collection protocol approved by MassDFW. • Each site where an applicant undertakes a study will be unique, so an applicant will need flexibility to propose for MassDFW's consideration certain aspects of the above referenced protocol, such as the 3 site-specific locations for sampling and the times of year for the sampling. • MassDFW, in turn, expects to provide the applicant with a protocol that addresses the sampling methods and effort requirements applicable to this fish community assessment. • MassDFW will provide the protocol for MassDEP's WMA Permit Guidance.
36.21 Contents of a Permit Application	
36.21(2)(c) requires that a detailed water conservation program and implementation table based on WRC standards be submitted. It is unclear how this plan is different from the standards conditions that MassDEP puts into the permit.	This is the same conservation plan. MassDEP asks all permit applicants to submit their conservation plan as part of the permit application in order to assess what conservation measures have been implemented prior to permitting so that the final conditions included in the permit can be tailored to the permittee's specific situation, if appropriate. This has been clarified in the WMA Permit Guidance.

36.22 Coldwater Fish Resource, Minimization, and Mitigation Planning Requirements	
Alternative Sources There should be clear criteria for assessing whether an alternative source is feasible when addressing impacts to coldwater fish resources (CFRs) and alternative source requirements for Tier 3 applicants.	MassDEP has included criteria for assessing the feasibility of using alternative sources in the WMA Permit Guidance.
In 310 CMR 36.22(8)(b), change "if demonstrated water needs" to "if actual water withdrawals".	This suggested change could create situations where withdrawals that were made in excess of the amount authorized through a permit (i.e., a withdrawal that was out of compliance) would be given extra time to implement mitigation plans. The wording remains unchanged.
36.22(5) Minimization Plan	
Minimization Goal Minimization should have a goal of improvement to GWC 3.	There are two means to improve streamflow in a subbasin: reduce withdrawals or increase returns to groundwater. The GWC designation of a subbasin does not include groundwater returns through septic systems or groundwater discharges. If additional returns to groundwater are put in place (e.g., a local wastewater treatment facility with a groundwater discharge permit is built), the improvements to net August groundwater and streamflow will benefit the subbasin, but will not be reflected as an improvement to the GWC of the subbasin. Beyond additional returns to groundwater, streamflow may be improved by reducing withdrawals. Public water supplies and other permitted withdrawals are critical for public health and safety, and these sources usually cannot be readily replaced. Public health and safety concerns dictate that permitted water withdrawals cannot be shut down completely. To better address streamflow improvements through minimization, MassDEP uses August net groundwater depletion. Minimization is required for withdrawals from subbasins that are 25% or more August net groundwater depleted with the intent that over time conditions will improve. Minimization requirements in permitting are a combination of reducing withdrawals through conservation, reducing the impact of withdrawals through optimizing the timing of withdrawals, and reducing impacts to net groundwater levels by returning groundwater to the subbasin.
Minimization is an open-ended process, possibly with open-ended costs, and no clear point at which permittees will have completed the requirements.	All permitted withdrawals in the most flow-depleted areas (subbasins with August net groundwater depletion of 25% or more) will be required to minimize the impacts of those withdrawals to the extent feasible through demand management, source optimization and releases from surface water impoundments. Such minimization measures will be identified through consultation with environmental agencies during the permitting process. MassDEP recognizes that water supply systems have unique circumstances that will be taken into consideration during the permitting process through individual consultations and the permit

	application review process. Should applicants request that MassDEP conduct a cost feasibility assessment, the applicant must submit a 10-year budget, including the costs and/or loss of revenue resulting from the implementation of minimization requirements, for review by MassDEP.
Minimization Plan 36.22(5)(a)(2). It should be clear that releasing water is a consideration, not a certainty.	MassDEP has added "taking into consideration the ability of the applicant to meet demand" to the regulations at 310 CMR 36.22(5)(a)(2).
36.22(6) Mitigation Plan for Tier 2	
Mitigation should not allow credit back to 2005.	The GWC and BC streamflow criteria for the 1395 subbasins used in permitting were developed using USGS streamflow studies based on 2000-2004 water withdrawal and streamflow data. Any improvements made since 2005 will result in improvements to the conditions on which permitting requirements are based. Therefore, MassDEP will provide mitigation credit for any measures that permittees have undertaken between 2005 and the time of the permit renewal if those measures remain in place and are still effective.
Cumulative analysis of downstream impacts Who is responsible for doing the cumulative analysis of withdrawals proposed in permit applications?	MassDEP will do the cumulative impact analysis.
Mitigation Feasibility Permittees should not design mitigation and evaluate its feasibility.	MassDEP will review all mitigation plans and feasibility studies developed as part of the permit application, and will determine the appropriate permit conditions and requirements.
Effectiveness of Mitigation • Concerns that mitigation, particularly indirect mitigation, will not result in streamflow improvements. • There is no way to track improvements to streamflow or environmental conditions, and even if improvements are observed, there is no reliable way to link improvements to required mitigation measures. • Permittees should not be asked to undertake indirect mitigation projects to address problems that are not related to water withdrawal impacts.	MassDEP recognizes that not all mitigation measures will translate to measurable streamflow improvement, but the mitigation measures that have been developed for the permitting process also address factors that MassDEP is required to consider in permitting. Those factors include "[r]easonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, and flood plains …." M.G.L. c. 21G, § 7.

Mitigation Hierarchy – upstream returns The mitigation hierarchy should be placed in the regulations and should include "upstream returns" as the second step in the hierarchy of returns.	The mitigation hierarchy will remain in the WMA Permit Guidance. MassDEP wants to maintain the flexibility to adjust the hierarchy as conditions change or as new mitigation options become available. Upstream returns will be added to the Guidance.
36.03, 36.16(1)(d), and 36.28(4)(c) Redundant Wells	
Redundant wells should not receive an exemption from system-wide conservation requirements for those registered water users needing a permit for a redundant well(s), but no additional withdrawal volume.	MassDEP wants to encourage redundancy in water supply systems to ensure adequate supplies should a supplier lose a source due to contamination, mechanical failure, or other causes. Therefore, these regulations allow a very limited number of systems to avoid permit conditions that may be seen as discouraging the development of redundant sources for registered-only public water supply systems. The exemption limits withdrawals from redundant wells to the volumes withdrawn in the 3 years prior to filing a permit application for the well. This provision is included in the regulations to prevent any new or additional environmental impacts.
Redundant wells should not require a permit if the well(s) will be used to withdraw registered water only.	This provision has been added to the regulations to codify MassDEP's long-standing practice and does not represent a change in permitting practices.
36.03, 36.08(1)(a) Replacement Wells	
Replacement wells should not be added to a registration through an amendment and should not be exempt from permitting requirements.	These regulations treat replacement wells consistent with the regulations of the Drinking Water Program, 310 CMR 22.00. The Drinking Water Program's regulations allow replacement wells, which are narrowly defined in terms of location and pumping capacity, to replace an existing well that is no longer operational, requiring only a minimum of testing and review. This is because replacement wells are physically close to and cannot have greater capacity than the well(s) they replace, and therefore will have substantially the same local and system-wide impacts. Accordingly, these regulations allow replacement wells to be added to registrations.
36.28 Permit Provisions and Conditions	
Cumulative Mitigation, 310 CMR 36.28(5), should be struck from the regulations.	M.G.L. c. 21G, § 11, directs MassDEP to establish a schedule of expiration dates for each water source so that all permit renewals in a water source are issued and expire together. The purpose of this statutory requirement is to allow MassDEP to review cumulative impacts of all withdrawals on other withdrawers and resources in the water source, as required by § 7(5) and (9) (factors to be considered in permitting). 310 CMR 36.28(5) gives MassDEP the flexibility to address cumulative impacts that extend beyond the subbasin in which the withdrawal is located.
Non-PWS conservation measures should be included in permit regulations. **WRC conservation standards are not applicable to cranberry cultivation**, but 310 CMR 36.21 says all	MassDEP intends to develop non-PWS conservation measures, in particular for the golf and cranberry industries, but this will require coordination with the industries to develop proper standards. This cannot be completed within the timeframe for promulgating these regulations, and will be added to the WMA Permit Guidance at a later date.

permits shall include a detailed water conservation program and implementation timetable based on the water conservation standards established by the Commission.	Language has been added to 310 CMR 36.21(2)(c) and 36.26(1)(j) indicating that MassDEP may include in permits for non-PWSs conservation measures based on industry-specific best management practices where the WRC has not established such measures.
Nonessential water use Golf course water use should be subject to seasonal limits on nonessential outdoor water use.	Golf course water use is subject to seasonal limits on nonessential outdoor water use under current program practice. Watering of tees, greens and limited watering of fairways is considered to be essential to the core function of the business, and therefore is not subject to non-essential water use restrictions. All other water use is subject to seasonal limitations according to a Seasonal Demand Management Plan that is developed as part of the permit. See the Golf Course Water Use Policy BRP/BWM/PeP-P00-5.
36.33 Transfer of a Permit	
Timeline for transfer approval There should be a timeline for MassDEP to approve a transfer request from a permittee.	The timeline for MassDEP's approval of a request to transfer a permit is governed by the regulations for Timely Action Schedule and Fee Provisions, at 310 CMR 4.10(6)(mm).
36.37 Appeals	
Changes to the appeal process would weaken the rights of environmental groups and 10-person groups to appeal WMA permits.	The changes to the appeals provision are intended to ensure that these regulations are consistent with MassDEP's rules for adjudicatory proceedings, 310 CMR 1.01, and recent adjudicatory appeal decisions regarding intervention. The ability of persons to intervene in adjudicatory proceedings before MassDEP has been and remains subject to the provisions of 310 CMR 1.01.
21 days to file a permit appeal, please extend this timeline.	M.G.L. c. 21G, § 12, specifies that an aggrieved party may request an adjudicatory hearing within 21 days of a decision by MassDEP. MassDEP cannot change this time period by regulation.
Underlying Science	
WMA implementation of SWMI is not holistic management The permitting process outlined in the regulations: • is not holistic, does not address impervious cover, and only targets PWSs; • is based on the assumption that water supply is the leading cause of flow depletion; • is hopelessly complex; • requires expensive mitigation and will not help supplies or conservation; and • will hurt economic growth.	The USGS study upon which the SWMI Framework is based points to both groundwater withdrawals as well as impervious cover as being highly correlated to a decrease in fluvial fish relative abundance. Through these WMA regulations, MassDEP is strengthening the permitting process to address the effects of water withdrawals on aquatic habitat. The impacts of impervious cover and stormwater (runoff from impervious cover) are addressed here as mitigation options to offset the impacts of increasing water withdrawals, by putting more water into the ground and by reducing water quality degradation. Issues of impervious cover and stormwater runoff are also regulated under other state and federal programs, and significant regulatory steps are being taken to reduce impacts of impervious cover under these programs.

	MassDEP will work closely with permittees as they navigate the new permitting process. Mitigation measures will be permittee-specific and applicants may request a cost feasibility assessment if they feel the costs associated with implementing minimization and mitigation measures will cause financial hardship. Because cost is taken into consideration in the permitting process, MassDEP does not anticipate these regulations will cause financial hardship or limit economic growth for Massachusetts' cities and towns.
Concerns about the science underlying the regulations • The science is not compelling enough to merit controls on PWSs. • The science is not sound. • "Best available science" does not mean "sufficient" or "irrefutable." • If these regulations are based on science, why are fish being linked to water use when there is no direct link between water supply and fish habitat? • Alewife are gone; the proposed remediation will not bring the fish back. **Praise for the quality of the science underlying the regulations** and for MassDEP's initiative to incorporate peer-reviewed science into the regulations. • The science behind GWC and BC is strong and peer-reviewed. • The science is sound and the timetable for implementation is generous and flexible.	The work done by USGS in collaboration with the Department of Fish and Game (DFG) is a nation-leading, first of its kind look at the relationship between fluvial fish, water withdrawals, and impervious cover. The culmination of over 10 years of state-funded data collection and modeling are being applied to water management decision-making through these regulations. The USGS fish and habitat study (Factors Influencing Riverine Fish Assemblages in Massachusetts, Armstrong et al., 2011, USGS SIR 2011-5193) and the methodology used to model watershed conditions has been reviewed according to the USGS peer review process and are considered appropriate for illustrating the relationship between fish community variables and flow alteration on a statewide scale. In addition, MassDEP asked two independent experts in aquatic biology to review the USGS fish and habitat study, as well as arguments critical of the use of this science. Results of the reviews supported the science and its application to state water policy. The USGS study points to both groundwater withdrawals as well as impervious cover as being highly correlated to a decrease in fluvial fish relative abundance. These proposed regulations will strengthen the existing regulatory structure to address the effects of water withdrawals on aquatic habitat. The preferred approach for permitting is to reduce withdrawals from areas and during times of year when they will have the greatest impact on streamflow and fisheries. This will be done through conservation, limiting summer outdoor water use, and using alternative sources where feasible. When additional mitigation is needed to address the impacts of withdrawals, feasible mitigation measures that address impervious cover and stormwater runoff will be included in permits to minimize runoff and water quality degradation. As with the practical application of any scientific model, more detailed site-specific information about an environmental system, a basin or a town will provide additional information. With that in mind, MassDEP has included in the regulations two means for permittees to augment the available information: 1) Refinements to data on water withdrawals, hydrologic basin boundaries, hydrogeologic features within a basin, and site-specific groundwater modeling that was used to determine

	the biological category and groundwater withdrawal category for any subbasin. 2) A method for certain permittees to undertake a site-specific fish community assessment to demonstrate that the local fish community is less impacted than indicated by the model. Finally, development of a statewide approach to identifying site-specific impacts and mitigation requirements eliminates the need for each permittee to develop comparable information as part of its permit application. A statewide approach provides a consistent platform for all permittees and will be less costly than developing individual assessments.
Agriculture Comments – Cape Cod Cranberry Growers Association	
Concerns about water conservation requirements	See 36.28 Permit Provisions and Conditions above.
Coldwater Fish Resources (CFRs) Concern about how 310 CMR 36.21(4)(a)1., which requires an applicant to minimize impacts on CFRs by optimizing use of their sources, will apply to cranberry growers, and about the potential cost of developing an optimization plan.	As with permits for any water use, MassDEP will work with applicants to develop permit conditions that are practical, applicable, and feasible for cranberry cultivation. Section 6a Table 9 of the WMA Permit Guidance outlines the process for developing the required optimization plan. The plan does not require fluvial fish studies nor the development of alternative sources. It is intended to minimize impacts to the extent a permittee has feasible alternatives. MassDEP will develop additional guidance on optimization planning for non-PWS permittees to be added to the WMA Permit Guidance at a later date.
Groundwater driven systems Concern about 310 CMR 36.21(5), specifically what additional or alternative requirements MassDEP will make for the Cape, Islands, and Buzzards Bay Basins and whether the requirements will be practical and applicable to cranberry agriculture.	As with permits for any water use, MassDEP will work with applicants to develop permit conditions that are practical, applicable, and feasible for cranberry cultivation. MassDEP is working with USGS to identify ways to assess withdrawal impacts in groundwater driven systems and will develop guidance on addressing impacts to coastal plain ponds, other surface water bodies and site-specific resources found in groundwater driven systems, which will be added to the WMA Permit Guidance at a later date.
Costs	
Request for a Report on Costs Prior to Promulgation of the Regulations Further financial analysis of the impacts to communities, including changes in permit conditions and increases to water rates, should be conducted before the regulations are promulgated. Report should, at a minimum: • Identify the specific municipalities and public water systems that are likely to be subject to the new permit conditions; • Identify which of these municipalities/systems	The regulations were developed keeping three key principles in mind: the protection of the Commonwealth's water resources, long-term economic vitality for the Commonwealth, and allowing flexibility in the implementation of WMA requirements for permittees. A key element of the revised regulations is water conservation and water use efficiency. For permittees where water conservation and water use efficiency will not fully offset the withdrawal of additional water, offsets can also be achieved through infrastructure projects, such as the repair of leaking pipes, that will help to sustain the permittee now and into the future. These regulations also allow permittees to receive credit for work being done within their communities to meet other regulatory requirements, such as stormwater and wastewater permits requirements. These regulations provide flexibility in designing the required mitigation and minimization plans to

will likely need to develop minimization, coldwater fishery or mitigation plans, and which permitting tier each will likely fall into; • Identify which public water suppliers are currently withdrawing from major river basins other than the one in which their service area is located; • Identify the typical costs or a range of costs for the indirect mitigation projects listed in Table 13 of the proposed WMA Permit Guidance; • Identify the water rate increases needed to meet the affordability thresholds in the cost feasibility guidance for each affected public water supplier; • Identify typical costs for the additional conservation measures listed in Table 10 of the WMA Permit Guidance; and • Identify additional staffing and costs that the Department, MassDFW and other state environmental agencies will incur to ensure timely processing of all permits and other administrative actions required by these revised regulations.	account for the infrastructure needs and limitations, operations, and local environment of each permittee. If the cost of compliance seems to be prohibitively high, permittees may request a cost feasibility assessment of their proposed mitigation plan. If, based on this assessment, a mitigation plan is deemed unfeasible, MassDEP will work with the permittee to develop an alternative feasible mitigation plan and/or adjust the implementation schedule. MassDEP cannot both provide this flexibility in mitigation and minimization planning and determine a standard, one size fits all, approach to implementing these regulations. The cost of implementing these regulations will vary by permittee, as will the impact on rate payers, and will be driven by multiple factors, such as the components of the minimization and mitigation plans selected by the permittee, the timing of the implementation of the plans, the availability of grant and loan funds,the extent of existing water conservation efforts, and the type of rate structure already in place. As a result, it is not possible to estimate individual rate increases for permittees until they have begun to develop their minimization and mitigation plans following the promulgation of these regulations. Just as the cost to permittees of implementing mitigation and minimization plans will vary, so will the costs for specific indirect and direct mitigation measures and implementation of additional conservation measures. Costs will be site-specific and driven by factors such as location, scope of the project, and scope of conservation measures. MassDEP can identify permittees with withdrawals in subbasins that are 25% or more August net groundwater depleted who will need to minimize and those with CFRs in their subbasins. MassDEP can also identify those permittees withdrawing from a major basin outside of their service area. MassDEP cannot, however, reliably or completely identify those permittees who will be subject to new permit conditions, those who will need to mitigate, or the resulting costs and water rate impacts to those permittees. MassDEP can speculate which permittees will ask for water withdrawals above their baseline, but how individual permittees choose to mitigate those withdrawals is primarily driven by the permittee. MassDEP is in the process of bringing additional staff on board to assist with WMA permitting.
Concerns about impacts to PWS finances, ability to fund infrastructure, economic growth • Too complex, too burdensome, too costly for the water department. • Will hurt economic growth. • Limiting withdrawals will hinder ability to provide public service.	While these regulations require that water be used in an economically and environmentally sound manner, the Department disagrees that the regulations will have a significant adverse impact on PWSs or their ratepayers. Permittees are required to implement standard conservation practices and outdoor water use restrictions as a first step in permitting. Any water use reduction that results can be considered in minimization and mitigation planning. Minimization will be required of PWSs when their withdrawals

• Will be forced to hire consultants and legal counsel. • Will force rate hikes with no guarantee of environmental improvement. • Money for mitigation will be money away from infrastructure improvement. • Mitigation will be too costly. • Will limit development and force PWSs to pay for improvements desired by "conservationists". • PWSs need funds for infrastructure improvements, not streamflow. • Will hinder economic development. • Complying with permit conditions will divert financial resources from the management of water supply infrastructure	are in subbasins with August net groundwater depletion of 25% or more. Mitigation will be required when their withdrawals are increasing over 2003-2005 levels (baseline). For PWSs where water conservation and water use efficiency will not fully offset the withdrawal of additional water, mitigation requirements can be met through • infrastructure projects, such as the repair of leaking pipes, that will help to sustain the PWS now and into the future; • credit for work being done to meet other regulatory requirements, such as stormwater and wastewater permit requirements; and • credit for measures undertaken since 2005 that qualify. These regulations provide flexibility in designing the required mitigation and minimization plans to account for the infrastructure needs and limitations, operations, and local environment of each permittee. If the cost of compliance seems to be prohibitively high, permittees can request a cost feasibility assessment of their proposed mitigation plan. If, based on this assessment, a mitigation plan is deemed unfeasible, MassDEP will work with the permittee to develop an alternative feasible mitigation plan and/or adjust the implementation schedule.
Citizen concerns about effects on their community, particularly on water rates • Increased water rates are an unfair burden on the elderly with fixed incomes. • Lawn watering and other waste should be targeted. • In a fragile economy with poor employment, this is a new tax burden. • Worried about water bans. • Towns' budgets cannot afford the required inspection, evaluation and remediation work.	These regulations have been developed to provide flexibility to permittees in designing mitigation and minimization plans so that the individual needs and circumstances of a community can be considered in determining what measures are feasible. Minimization and mitigation plans will be developed based on the infrastructure needs and limitations, operations, and the local environment of each permittee. Several factors will help communities manage any additional costs incurred due to permit requirements: • The majority of WMA permittees are already implementing standard conservation practices and outdoor water use restrictions. • As a result, communities that have a strong local conservation program may reduce or avoid the need for minimization and mitigation permit requirements. • Mitigation plans may be implemented gradually as water withdrawals increase over the course of the 20-year permit, thus spreading costs over time. • In communities where there are concerns that the cost of mitigation will be prohibitive, permittees can request a cost feasibility assessment. If the costs are deemed to be too burdensome, MassDEP will work with the permittee to develop an alternative plan to meet permit requirements.
Unfunded Mandate	The Massachusetts Supreme Judicial Court has held that the Local Mandate Law, M.G.L. c. 29, § 27C,

The SWMI-related permit conditions constitute an unfunded mandate for public water suppliers.	"does not exempt municipalities from laws or regulations of general applicability governing activities engaged in by private businesses, when the municipality voluntarily engages in such activities." *Norfolk v. DEQE*, 407 Mass. 233 (1990). Municipalities are not legally required to supply water to their residents. Because municipalities are only subject to the WMA regulations if they voluntarily choose to supply water to their residents, and because the regulations apply equally to public and private permittees, the regulations do not constitute an unfunded mandate.
Cost of defending against appeals of permits issued with SWMI-related conditions will be burdensome for some municipalities.	With or without these regulations, the threat of appeals of WMA permits has been an issue for some time and will continue to exist. SWMI in part grew out of recognition that costly litigation was bogging down many WMA permit decisions. The SWMI Framework was designed to accommodate most common situations, but there will be some situations associated with water supply systems and environmental conditions that are best considered on a case-by-case basis. Over the past several years, MassDEP has instituted the practice of issuing draft WMA permits for public review and comment before final permit issuance. MassDEP believes this will help identify issues that might lead to appeals before the permit is issued, and will allow the parties to craft solutions to avoid appeals. The proposed regulations codify the draft permit/public review process which MassDEP believes will help reduce the number of costly permit appeals moving forward.
Cost Feasibility Assessment	
Cost Feasibility Assessment • The feasibility guidance is too generous – DEP will receive far too many requests for feasibility determinations, and will be subject to workload and political pressure. • The Tighe and Bond data is general data and will not apply well to individual communities. • Screening thresholds are flawed. The metrics are flawed, do not measure burdens, and are not supported for regulatory processes. • Thresholds chosen are too high. • Guidance does not provide sufficient direction about how costs should be projected.	Permittees can request a cost feasibility assessment for their proposed mitigation plan. If, based on this assessment, a mitigation plan is deemed unfeasible, MassDEP will work with the permittee to develop an alternative feasible mitigation plan and/or adjust the implementation schedule. This means that the economic circumstances and resources of each community will be considered in developing plans for meeting permit requirements. In developing an approach to assess cost feasibility, MassDEP followed the approach taken by other agencies, including the U.S. Environmental Protection Agency (USEPA), and will consider rates as a percentage of median household income (MHI) as an affordability criterion when determining cost feasibility. Both the water rates and the MHI used for this analysis are community-specific. MassDEP looked at the range of rates as a percentage of MHI statewide and set thresholds based on statewide averages, as well as using published reports and documented practices by other agencies. The cost feasibility assessment is intended to consider the impacts of implementing WMA permit conditions within the context of the supplier's overall operating, maintenance, and capital improvement budget. MassDEP does not believe that it can assess the impacts of implementing new WMA requirements on water suppliers without looking at those impacts within the context of the overall operations of the supplier. The cost feasibility assessment is also intended to be compatible with the principles of asset management and long-term financial planning.

• There is a lack of objective criteria for determining when costs are infeasible. • The guidance considers the costs of meeting other regulatory programs in the feasibility assessment leading to a possible scenario where a permittee could claim that mitigation is infeasible because of other regulatory requirements.	There are other metrics (e.g., unemployment rates, bond ratings, property tax revenues) that could also be utilized for this cost feasibility assessment. MassDEP considered these metrics and other tools currently available to conduct cost feasibility assessments when developing its assessment methodology. MassDEP wanted to confine the information requested in the cost feasibility assessment to information that public water suppliers should have available for planning purposes (e.g., information that would be included in a five-year budget, a capital improvement plan, an asset management plan). MassDEP also does not want to consider mitigation and minimization planning separately from the various other regulatory requirements for public water suppliers. MassDEP would like permittees to consider their long-term water-related needs, both water management and other (e.g., safe drinking water act, stormwater), when designing their mitigation and minimization plans, a primary reason for the design of the cost feasibility assessment outlined in the WMA Permit Guidance. USEPA uses the threshold of water rates as 2.5% of MHI to determine the affordability of new regulations. There are only a handful of systems in the Commonwealth with rates above 1% of MHI. Requiring systems to reach rates that are 2.5% of MHI prior to mitigation and minimization costs being reviewed by MassDEP would result in a two to five fold increase. MassDEP does not believe that water management mitigation plans should result in such significant impacts to rate payers. The Massachusetts Water Infrastructure Finance Commission considered USEPA's affordability threshold, as well as several other thresholds, and came to the conclusion that the Commonwealth could fund the infrastructure needs gap if water systems rates were 1.25% of MHI. Although this figure was not used as an affordability criteria, it is used as a proxy for full-cost pricing. MassDEP believes that if a water supplier is charging rates that are 1.25% of MHI, any additional rate increases resulting from the implementation of a water management permit may be onerous for the community. Accordingly, if a water supplier is charging rates that are at least 1.25% of their community's MHI, MassDEP will work with that community to come up with a mitigation strategy that is feasible for the water supplier. In addition to the upper limit threshold set at 1.25% (rates as a percentage of MHI), MassDEP has set a series of additional threshold values to assess the impacts of water management permit conditions on rate payers. These thresholds include: • The statewide average for local water bills as a percentage of local MHI based on the 2010 Tighe and Bond rate survey was 0.52% of MHI. Applicants with average water bills below 0.52% of their local MHI will be assumed to have capacity to increase their rates to raise capital

	to fund WMA permit conditions and other regulatory requirements. • The ability of the applicant to pay for significant capital improvement costs out of reserves or finance those projects over the duration of the permit, thus spreading any needed costs and rate increases over many years. • Whether the proposed mitigation and minimization measures will result in an annual rate increase of 2% or more. MassDEP does not believe that the thresholds established in the cost feasibility assessment will result in an overwhelming number of requests for cost feasibility assessments, nor are they too generous or onerous. MassDEP walked through the assessment with several water suppliers and found the results of the mock assessments reinforced the applicability of these thresholds to the WMA program. The cost feasibility assessment laid out in the WMA Permit Guidance includes a clear set of criteria for each step in the assessment process. Additional guidance on the preparation of the 10-year budget is provided in the template Excel spreadsheet (EPA's Asset Management and Debt Capacity Tool) as referenced in the Guidance. MassDEP will provide additional information in the Guidance for preparing the 10-year budget. MassDEP's methodology will use data from the Tighe and Bond biennial water rates survey and census data to derive rates as a percentage of MHI for each community to assess cost feasibility for mitigation and minimization requirements. If Tighe and Bond data is not available for a given community, the community will need to provide its own rate information. MassDEP is using the Tighe and Bond survey data as the primary source of data for water rates because rates were derived in a consistent manner statewide.
Permittees' concerns about specific aspects of individual permits	
Permittees' concerns include baseline, tier designation, and requirements for their water supply system, among others.	MassDEP anticipates extensive outreach to permittees as new permits are developed under these regulations. Outreach will include workshops in each basin as permits come up for renewal, individual consultations to review each permittee's unique circumstances, and consultations to develop minimization and mitigation plans for individual permits. MassDEP anticipates ample opportunity to review and address specific concerns during consultation sessions and will not address concerns about individual permits in this Response to Comments. As with all permits, MassDEP will work with applicants to develop permit conditions that are practical, applicable, and feasible for their specific circumstances.
Unintended Consequences of These Regulations	
Groundwater Contamination	There is nothing in the regulations that exempts discharges of wastewater or stormwater from

Concerns that the emphasis on • discharging wastewater within the subbasin from which it came, or as locally as possible, and • stormwater recharge projects for indirect mitigation, could have unintended but predictable impacts to groundwater quality, and could lead to drinking water contamination.	complying with other applicable laws or regulations. MassDEP will work to ensure that all permit requirements are in accordance with other applicable laws and regulations, including working with • Drinking Water Program staff to ensure water supply protection, Zone II and other requirements in WMA permits are consistent with Drinking Water Program requirements, and • Stormwater and groundwater discharge staff to ensure permit requirements will have no unintended consequences for groundwater quality.
Other Topics	

Cape Cod 208 watershed planning
Regulations will not work in conjunction with Cape Cod Commission's section 208 watershed planning process for Waquoit Bay.
• WMA regulations assume septic discharges recharge groundwater and permit withdrawals based on that recharge.
• There are factors that will change this water balance that DEP is not considering, such as:
  ○ Many Cape towns' CWMPs include sewers and new/upgraded wastewater treatment plants
  ○ Policy limiting discharge of high-nitrogen effluent in sensitive sub-watershed
  ○ Climate change
• WMA should develop site-specific plans like superfund/SDWA cleanup at Joint Base Cape Cod.
• Concern about reinjecting effluent containing contaminants
• Cold water fish are not adequate indicators for Waquoit Bay.
• $800,000 grant money is not nearly enough for implementation.
	The 208 watershed planning process is entirely separate from the WMA permitting process. The WMA regulations do not consider recharge to groundwater by septic systems and groundwater discharges when determining the volume available for permitting. Septic system discharges and groundwater returns are considered when determining mitigation requirements. Should groundwater discharge patterns change, MassDEP will adjust the assumptions used in assessing the impacts of permitted water withdrawals.
	
	The regulations require development of site specific mitigation plans by permittees whose withdrawals are above baseline. These regulations (310 CMR 36.22(9)) also provide that measures undertaken under other regulatory programs can receive mitigation credit. This provision will ensure that the WMA permitting requirements mesh with a variety of other regulatory and watershed protection program requirements (e.g., requirements of the Municipal Separate Storm Sewer System permit (MS4), and elements of a Section 208 Watershed Plan).
	
	The grant money available for SWMI-implementation projects is provided through the capital budget and is separate from and should not be confused with the Section 208 Watershed Plan funding. MassDEP anticipates SWMI-implementation grant funding will be available for several years to come.

Withdrawals should cease during drought conditions All permits should follow the Russell Biomass model – cutting back gradually to 0 at low flows	This suggestion, based on proposed permit terms for the Russell Biomass facility, is not appropriate for all permits. Public water supplies are critical for public health and safety, and therefore public water supply withdrawals cannot be shut down during a drought.

Climate change will make environmental problems worse. The regulations should have provisions for protecting against climate change.	The flexibility built into the mitigation and minimization planning in the regulations will allow MassDEP to work with permittees to address emerging concerns, such as climate change, during the consultation process and add permit-specific conditions that address new issues during the permit application and renewal process. MassDEP can also work with permittees during 5-year reviews to address emerging issues as they arise. The effects of climate change and other emerging concerns will vary for individual permittees and cannot be accurately predicted in advance. As a result, MassDEP believes a flexible approach to address such concerns is more appropriate than specific regulatory provisions.
Regulations Changes and Guidance Changes that will be made based on review of public comments received.	
Regulations Changes	
In the definition of "feasible" (310 CMR 36.03), change "suitable for" to "capable of".	Change made.
310 CMR 36.21(2)(c) says all permits shall include a detailed water conservation program and implementation timetable based on the water conservation standards established by the Commission. Commenters questioned the applicability of this to the cranberry industry and instead suggested using the **"**established Cranberry Best Management Practices currently employed and outlined in the MOA developed in 2004 between CCCGA, MassDEP and the State Commission for Conservation of Soil, Water and Related Resources"	In response to this comment, the following language has been added to 310 CMR 36.21(2)(c): "or where the Commission has not established such standards, other industry-specific best-management practices appropriate to the permitted water use."
A similar concern was raised regarding 310 CMR 36.26(1)(j).	The same language as above was added to 310 CMR 36.26(1)(j).
310 CMR 36.22(5)(a)(2) should be amended to make clear that releasing water is a consideration, not a certainty. Suggest amending language to say "evaluating whether to release water from surface water impoundments …"	In response to this comment, the language "taking into consideration the ability of the applicant to meet demand" has been added to 310 CMR 36.22(5)(a)(2).