The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
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Boston, MA 02114-2524

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August 25, 2006

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN PHASE II REPORT/
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Comprehensive Water Resources Management Plan
PROJECT MUNICIPALITY	: Acton
PROJECT WATERSHED	: Assabet
EOEA NUMBER	: 11781/13828
PROJECT PROPONENT	: Town of Acton
DATE NOTICED IN MONITOR	: July 10, 2006

As Secretary of Environmental Affairs, I hereby determine that the Comprehensive Water Resources Management Plan (CWRMP) Phase II Report/Expanded Environmental Notification Form (EENF), here in after referred to as CWRMP Phase II Report, document submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (G. L., c. 30, ss. 61-62H) and with its implementing regulations (301 CMR 11.00).

Overview

As described in the CWRMP Phase II Report, the project involves the phased development of a Town-wide comprehensive wastewater collection and treatment management plan to address the immediate and long-term growth needs for the Town of Acton.

The Town has completed a CWRMP Phase II Report that addresses the planning process for town-wide water resources management with the evaluation of alternatives as part of a 20-year plan for water resources protection. The document includes recommendations of possible solutions for the Needs Planning Areas. The current wastewater disposal system for the majority of parcels in the Town of Acton is proposed to remain unchanged. The recommended plan is a combination of extensions of the existing sewers; cluster systems using existing private treatment systems and possible public/private solutions; shared systems between neighbors; and the establishment of wastewater management districts.

MEPA History

The CWRMP Phase II Report is part of a wastewater planning process that has been ongoing since 1998. The Town of Acton prepared an ENF in October 1998 for the Middle Fort Pond Brook Sewer Project. The Town of Acton wanted to accelerate the engineering design of a new advanced wastewater treatment plant (WWTP) proposed to be built on a 35-acre town-owned parcel of land on Adams Street. The WWTP would treat up to 250,000 gallons per day (GPD) of waste and discharge treated effluent to a groundwater discharge system also located on Adams Street site. The Assabet River flows adjacent to the site. A chief reason for the accelerated WWTP design and construction and phased approach to Town-wide facilities and water resources planning was the impact to public health and water quality from older under-designed and failing onsite septic systems in several sections of Acton.

The Secretary of Environmental Affairs issued a Certificate for the project on December 1, 1998. A Special Review Procedure (SRP) was established to facilitate the review of the EIR/Facilities Plan. This allowed the Town of Acton to proceed with design and construction of an advanced WWTP on Adams Street and approximately ten miles of collection systems. The SRP was established to address the remaining town-wide wastewater facilities planning and assessment requirements under a comprehensive phased set of reports and subsequent filings of Expanded ENFs.

This assessment was also in conjunction with the guidelines issued by the Department of Environmental Protection (DEP) regarding comprehensive water resources management planning to address other factors to establish an effective town-wide wastewater management plan, such as stormwater management, groundwater recharge, natural resources protection and surface water quality.

The Secretary of Environmental Affairs issued a Certificate on the CWRMP Phase I Report of the Town-wide Needs and Growth Management Analysis on August 16, 2004. The Phase I Report presented the findings and conclusions of an assessment of current environmental conditions in and around Acton. Water demand projections were estimated for the 20–year study period and impacts to the present and future water supply were reviewed. Current stormwater systems and programs were also reviewed. In addition, current wastewater management systems were discussed, followed by a determination of wastewater needs. Finally, potential locations for satellite wastewater treatment facilities were also presented.

CWRMP Phase II Report

Completion of MEPA review of the CWRMP Phase II Report is a key milestone for the Town of Acton, but it does not mark the end of planning for this project. Refinement of plan elements to address neighborhood concerns, additional work and Town Meeting approvals on

growth management measures and financing, and final design and permitting are scheduled in the future. I commend the Town for working diligently on these important issues, and anticipate that the discussion and deliberations in Town Meeting and other public forums will serve to ensure that measures that are acceptable to the majority of citizens will be implemented.

Many of the comments on the CWRMP Phase II Report expressed concerns with the "possible solutions" beyond the recommended plan of extensions of the existing sewers and cluster systems using existing private treatment systems. The Town should work closely with DEP to address any of the proposed possible solutions for wastewater disposal. I also encourage the Town to consult with the Massachusetts' Riverways Program, which has provide detailed suggestions in its comment letter for options as planning progresses. I remind the Town that further environmental analysis and a Ground Water Discharge Permit from DEP will be required if the Town proposes to discharge wastewater into Zone II areas.

The Town should work with DEP to develop detailed scopes of work for any hydrogeological investigations for groundwater discharge sites prior to the initiation of any fieldwork. DEP has stated in its comment letter that it has no further comments beyond those that were stated during the August 2004 review of the Phase I report. DEP has also indicated that its comments on the CWRMP Phase I Report were adequately addressed in the CWRMP Phase II Report.

The Town should also consult with the Natural Heritage and Endangered Species Program (NHESP) because several of the Needs Planning Areas are located within areas mapped as Priority Habitat for state-listed rare species as indicated in the 11th Edition of the *Natural Heritage Atlas*. The Town will need to provide NHESP with enough information to evaluate potential impacts to state-listed rare species impacts under the Massachusetts Endangered Species Act (MESA) Regulations (321 CMR 10.00).

Several of the commenters expressed concern with growth management. This issue is one of the most complex and contentious for communities in metropolitan areas, such as Acton. The CWRMP Phase II Report describes measures to address growth and development that could potentially be induced by improvements in wastewater disposal infrastructure. Similarly, the projected costs and funding mechanisms for the project remain the subject of some controversy. While the subject of cost allocation and project financing are beyond the scope of MEPA review, I am confident that the well-developed public participation process in the Town of Acton and the need for Town Meeting approval of funding for the project will provide a mechanism for resolving this issue equitably.

The CWRMP Phase II Report is a plan and a framework for the Town of Acton to guide water and wastewater resources management as it manages growth and development. When the Town is ready to submit a specific infrastructure development or expansion project related to the CWRMP, it should submit a Notice of Project Change (NPC) for any portion of the plan that

exceeds MEPA review thresholds. In this way, I am herby amending the Special Review Procedure (SRP) that was previously established by this Office to guide the review of the CWRMP. The Town should file a NPC under the original EOEA #11781. I recommend that the Town arrange a pre-filing meeting with the MEPA Office before finalizing and submitting any NPC.

August 25, 2006
Date

Robert W. Golledge, Jr.

Comments received:

07/07/06	Water Supply District of Acton
07/17/06	Arthur Gagne
07/18/06	Billing Street Resident (unable to make out handwriting), former member of CAC
08/02/06	Carol LoPiccolo
08/03/06	Carol Holly
08/10/06	ACES-Acton Citizens for Environmental Safety
08/10/06	Nancy Tavernier
08/10/06	Andy Munro
08/11/06	Natural Heritage and Endangered Species Program (NHESP)
08/11/06	Don Barron
08/12/06	Paul Gaboury
08/14/06	Allen Nitschelm
08/15/06	Terra Friedrichs
08/15/06	Mary Michelman
08/15/06	Massachusetts Riverways Programs
08/15/06	Eric Hilfer
08/16/06	Clean Water Action
08/16/06	Charles Kadlec
08/17/06	OAR-Organization for the Assabet River
08/18/06	Department of Environmental Protection, Central Regional Office
08/18/06	Response to comments by Proponent

RWG/ACC/acc

AC

WOODARD & CURRAN
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts, New Hampshire, Connecticut, Illinois, Florida
Operational offices throughout the U.S.

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AUG 18 2006

MEPA

August 18, 2006

Secretary Stephen R. Pritchard
EOEA Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Draft Acton Comprehensive Water Resources Management Plan (CWRMP) June 2006
Reference Number: EOEA 13828

Dear Secretary Pritchard:

On behalf of the Town of Acton, Woodard & Curran has reviewed the public comments received by MEPA as of August 17, 2006 and are of the opinion that all the issues raised in the letters from local citizens have been satisfactorily addressed in the body of the CWRMP report and the ENF filed on July 14, 2006. Moreover, based on the report's findings and conclusions, we submit that all relevant environmental, technical, cost and public management issues have been addressed, and an EIR is not required for implementation of the recommended plan.

It is important to note that the CWRMP is a plan and framework for the Town to follow over the next 20 years to guide water and wastewater resources management as it manages its growth and development. As such, this plan has no specific construction activities or other actions proposed at the present time that will result in resources impacts. It is our further understanding that in the future, when the Town is ready to submit a specific infrastructure development or expansion project related to the CWRMP plan, an ENF will then be submitted for any portion of the recommended plan that triggers MEPA review. This would include submittal of a MESA Project Review Checklist or other MESA review submitted to the NHESP of the MA Division of Fisheries & Wildlife. Again, any applicable state agency review or permit needed at a future time when a Town project is being planned would be subject to the applicable MEPA review thresholds.

Additionally, it is our and the Town's understanding that MADEP has reviewed the Acton CWRMP and ENF and has submitted its comments to MEPA stating that the report adequately addresses the DEP's comments and review standards, and that DEP supports a finding that no EIR is necessary.

Many of the comments received from citizens pertain specifically to Indirect Potable Reuse (IPR) into Zone II limits. IPR was reviewed as an option because under DEP's regulations there is a mechanism to utilize this technology. Currently the DEP's rules are quite stringent regarding IPR and an in-depth detailed study of any area identified as a potential site for Reuse would be required along with significant regulatory review and public comment. With that said, the Town is not currently pursuing IPR as part of the recommended plan.

Regarding other citizen comments, such as the inadequate analysis conducted or inadequate financial assessment of options, we are of the opinion that the CWRMP, as submitted, satisfies the requirements of the MEPA process and addresses the potential environmental impacts and benefits, public health impacts and benefits, technically viable alternatives, and cost considerations appropriate to the document's town-wide, 20-year planning framework and needs assessment.

WOODARD & CURRAN
Engineering • Science • Operations

Sincerely,
WOODARD & CURRAN INC.

Daniel Garson, AICP
Senior Vice President

DG/
Project Number

Enclosure

cc: Ms. Anne Canaday, MEPA Analyst
Doug Halley, Director, Acton Board of Health
Brent Reagor, Assistant Director, Acton Board of Health

AC

OAR

Organization for the Assabet River
9 Damonmill Square, Suite 1E, Concord, Massachusetts 01742

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AUG 21 2006

MEPA

August 17, 2006

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fax: (978) 318-0094
oar@assabetriver.org
www.assabetriver.org

Robert Golledge, Secretary
Executive Office of Environmental Affairs
100 Cambridge St., Suite 900
Boston MA 02114

Attn. Ann Canaday, MEPA Office

Subject: OAR Comments on the Environmental Notification Form, Acton CWRMP; EOEA #13828

Dear Secretary Golledge,

The Organization for the Assabet River appreciates the opportunity to review and comment on the ENF for the Town of Acton's Comprehensive Water Resources Management Plan (CWRMP). OAR is a membership organization representing approximately 1000 households and businesses in the Assabet River watershed. Our mission is to protect, preserve, and enhance the Assabet River, its tributaries and watershed. Fort Pond Brook and Nashoba Brook flow through Acton, and are important tributaries to the Assabet River. Both brooks suffer from nutrient pollution and low flows during the summer.

We are concerned that this plan may result in nutrient loading to the Assabet River and its tributaries. We do not believe that the ENF and CWRMP "provide a full environmental and impact assessment" of the wastewater management systems on the river and its tributaries (ENF, p. 5). A full Environmental Impact Report is needed to provide adequate information to ensure that these surface waters are not further degraded.

The TMDL for the highly eutrophic Assabet River determined that phosphorus was the limiting nutrient and specified removal levels that would be required for the river to reach its designated Class B status of Fishable and Swimmable. Major investments to upgrade municipal wastewater treatment plants to reduce the release of phosphorus to the river are being made by communities in the Assabet watershed.

The CWRMP focuses on on-site and decentralized wastewater systems with discharge to groundwater. While discharge to groundwater has the major advantage of recharging local aquifers, we are concerned that the trend toward decentralized wastewater treatment facilities (package and clustered plants) without treatment may add phosphorus to the river's tributaries. Decentralized facilities are often located in well-drained alluvial soils near to surface waters where attenuation of phosphorus may be minimal. This would undermine the investments being made in phosphorus removal from the Assabet mainstem and further degrade the tributaries. OAR data from monitoring sites below Warner's Pond show elevated nutrient levels and the eutrophication of Ice House Pond.[1]

[1] Total phosphorus level of <.025 is the EPA's reference condition for unimpaired waters for Ecoregion XIV/59. OAR Water Quality Monitoring Program.

For this reason, *more information is required to assess the environmental impact of decentralized facilities*. Technologies for nutrient removal prior to discharge should be thoroughly assessed in an Alternatives Analysis. Discharge limits should be evaluated for decentralized systems.

Our specific comments focus on ensuring that surface water quality is not degraded by nutrient pollution.

1. **Clustered systems and advanced onsite treatment technologies**. According to the ENF there are nine privately-owned package wastewater facilities in Acton, and more decentralized wastewater systems are likely in the future. Cluster/neighborhood systems are the "preferred solutions" for property abutting Nashoba Brook in Needs Planning Area 3 (Fig. 2.8, ENF). Where discharge to groundwater is in close proximity to surface water, the level of treatment to remove phosphorus and nitrogen prior to discharge to protect water quality should be evaluated. The EIR should contain an *alternatives analysis which reviews and rates the technologies available to remove phosphorus and nitrogen suited to these facilities*. Local regulatory guidance regarding location of such facilities should be proposed in order to ensure that they are located far enough from surface waters to avoid leaching of nutrients into Assabet River tributaries.

2. **Monitoring**. The Town should have a clear plan for monitoring phosphorus concentrations in surface waters downstream of decentralized systems.[2] Currently, only fecal coliform bacteria counts are monitored in Fort Pond Brook and Nashoba Brook, but "many sampling points still exceed the Massachusetts Class B inland water threshold". (CWRMP Phase I, p. 2-29.). This would suggest that nutrient loading is also occurring. The existing water quality monitoring program based on micro-watersheds should include nutrient monitoring (CWRMP Ph.2, p. 3-10). Groundwater monitoring should be performed for groundwater discharge systems.

3. **Water supply and withdrawals**. Nashoba Brook is classified as a "hydrologically stressed basin" due to low stream flow (MWRC, 2001). As a result any actions which may affect stream flow or water quality should receive closer scrutiny. The bulk of Acton's public water supply is withdrawn from seven public wells or well fields in the Nashoba Brook watershed, as well there are a number of privately owned wells. According to the Phase I report, Acton is seeking to increase its acceptable withdrawal limit (p.3-12). Information regarding the impact on base flow of Nashoba Brook should be provided to ensure that increased withdrawals will not negatively impact surface water flow.

4. **Sewer expansion**. Connection to the Acton sewer is proposed in 5 Needs Planning Areas (plus the already permitted Powdermill Plaza connection). No expansion of flow to the Middle Fort Pond Brook wastewater treatment facility at Adams Street should be planned which would exceed its currently permitted capacity. Its current permits reflect the limits necessary to protect the water quality of the Assabet River and should not be compromised.

Thank you for considering our comments. Please call me or Alison Field-Juma, OAR's Policy Director, if you have any questions concerning this letter.

Sincerely,

Suzanne Flint
Acting Executive Director

[2] Baseline data on nutrient concentrations in the tributaries was requested by OAR in a comment letter to EOEA dated 11/23/98.

AC

CLEAN WATER ACTION

262 Washington Street, #301, Boston, MA 02108
Tel: (617) 338-8131 Fax: (617) 338-6449

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AUG 16 2006

MEPA

August 7, 2006

Secretary Stephen R. Pritchard
Executive Office of Environmental Affairs (EOEA)
100 Cambridge Street, Suite 900
Boston MA 02114

Attention: **Anne Canaday**

RE: **EOEA 13828**

Dear Ms. Canaday and Mr. Pritchard,

Clean Water Action is submitting comments on the ENF and Comprehensive Water Resources Management Plan (CWRMP) submitted by the town of Acton.

Our comments are specific to the suggestion that Indirect Potable Reuse (IPR) may potentially be used in the Zone II of this water supply, and in fact, any other water supply.

We reviewed the Interim Guidelines on Reclaimed Water (Revised) Policy # BRP/DWM/Pep-P00-3 and found the suggestion that IPR be used in a Zone II to be in contradiction with the aims and rules set out in that document whose aim is to "insure safe reuse that has beneficial water resource implications." While the Interim Guidelines are not final and may be reviewed, we think that the Interim Guidelines show the clear intent of the Massachusetts Department of Environmental Protection (MADEP) to protect our drinking water sources.

The Interim Guidelines clearly state that "*artificial recharging of aquifers shall be permitted* ***only in basins, sub-basins and watersheds acknowledged to be stressed water resource areas, where it is necessary to replenish streamflow, enhance the productivity and capacity of an aquifer, and/or improve upon or mitigate water quality problems.***"

This is not the case in Acton. In fact, it appears that the use of IPR is suggested as a solution to a wastewater disposal problem for Acton – not a means to address a water supply issue.

We would strongly oppose any use of treated wastewater in drinking water recharge areas. We also propose that in the instance that the Interim Guidelines be revised, they should clearly indicate that water saving and conservation measures should first be implemented, all other options explored, and that IPR should be used only if no other means to minimize the impact on stressed water resources is available.

The Interim Guidelines also clearly state that *"the water quality criteria for the treated wastewater is extremely rigorous,* ***requiring that reclaimed water be virtually pathogen and contaminant free.*** *"* It also states that *"reclaimed water discharges would be approved into Zone IIs* ***IF*** *they result in net overall environmental improvements [...]* ***AND*** *will not adversely impact groundwater quality in the Zone II."*

This also has not been shown to be the case in Acton.

It is difficult to make the case that any discharges of reclaimed water would not adversely impact water quality. To do so would require full testing of both the reclaimed water and the groundwater; should the reclaimed water contain any contaminants not already present in the groundwater or at concentrations in excess of that present in the groundwater, its impact on water quality should be considered to be adverse.

The determination of whether the impact of the reclaimed water is adverse should not be limited to the few contaminants listed in the Interim Guidance. The disinfection requirement, if met through chlorination or other chemical means, may lead to the presence of disinfection by-product chemicals in excess of what may be present in the groundwater and hence, be an adverse impact.

In addition to contaminants currently tested by drinking water treatment plants, we are concerned about the potential presence of other unregulated and unmonitored "emerging" contaminants in treated wastewater. Nationwide surveys have shown a host of new contaminants including but not limited to: household cleaning chemicals, personal care products, pharmaceuticals, plastcicizers, caffeine, and viruses. A study by the Unites States Geological Survey (USGS) found detergent, steroids, plasticizers, drugs and other chemicals from human waste in over 80% of 139 water bodies tested. Antibiotics, fire retardants, and insect repellants were found in more than half of all water samples.

While some of the chemicals may be benign, we do not have the information to evaluate the health impacts of most of them. Some of the emerging contaminants that have been detected in treated wastewater have been shown to impact animal and human health. Reports of feminized fishes, altered sex ratios, and tumors raise concerns for potential human health effects. For some, we do not have the methods to detect them, let alone remove them from the wastewater.

With new chemicals entering the market every year, the number of these contaminants will keep expanding and their health impacts, alone or in combination, cannot be predicted. The National Research Council (NRC) estimated that potential drinking water contaminants to number tens of thousands of substances. We urge the EOEA and the MA DEP to protect our drinking water sources and not to allow the use of treated wastewater in recharge areas.

The Interim Guidelines also require an alternative disposal option. In our opinion if an alternative disposal option is available that is protective of health and the environment, IPR should not be used at all in water recharge areas.

We also strongly request that the MA DEP maintain the requirement of a 2 year travel time from a treated wastewater disposal site to any groundwater supply.

In conclusion, we urge the EOEA to reject any proposal that Acton use IPR in their Zone II. We also request that in any future revision of the Interim Guidelines on Reclaimed Water, the MA DEP maintain the 2 year travel time and reinforce the water quality protection measures.

Sincerely,

Lee Ketelsen

Lee Ketelsen
Clean Water Action
New England Director

cc. Glenn Hass, Acting Assistant Commissioner, Bureau of Resource Protection
David Terry, Drinking Water Program
Thomas Bienkiewicz, Director, Wastewater Treatment

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JUL 18 2006
MEPA

AC

Attn: MEPA Office
EOEA # 13828

July 14, 2006
Secretary Stephen R. Prtichard
Anne Canaday

Gentlepeople,
I write in response to the submission of Acton's Comprehensive Water Management Resources Plan. I was a member of the Citizen's Advisory Committee that worked with the consultants, Acton's Health Department officials and other citizens to review this plan through it's very long birthing.
There are several aspects that I think are important for everyone to keep in focus: it is a twenty-year plan; none of the priorities can be implemented without prior approval of Town Meeting; we were looking at the needs for the entire Town and know that some of the areas will need far more intensive remediation in the future; new technologies that have yet to be invented will come into play over the life of this plan and undoubtedly modify some of the solutions.
Although you are likely to get complaints that the CWMRP does not address water resources, those complaints are spurious. Ground water is Acton's most important resource. If we do not curb the seepage from septic tanks into this resource, we will not have drinking water.
Another area of concern has been with the study for Indirect Potable Reuse. This is an idea that is being implemented in other areas in the US and Europe. It is one that needs investigation and study. That is what the CWRMP is suggesting. It does not suggest that we use the well fields off of High Street tomorrow---it calls for further study. This, as you must be aware, is of concern to many people outside of Acton. I have read some preliminary reports from people at MIT looking into the subject. The conclusions are: it needs more study.
One of the original solutions in the report was the use of land off Weatherbee Street for subsurface disposal. Granted this land is under Conservation Restrictions, but I think the vehement opposition to even the consideration of this site is short sighted. There will come a time, well within the 20-year life of this report that East Acton will need a sewer. Taking the Weatherbee solution out of the mix now, does not recognize expected technological changes. Nor does it recognize that many residents allow their children to play in their yards where they have subsurface disposal.
Generally, I am pleased with the results of the plan and do not begrudge the extra years that were spent in its completion.
Do accept it, Acton needs to get on with the listed solutions.

Sincerely,

[signature]

8 Billings St
Acton, MA
01720

AC

RECEIVED

JUL 17 2006

MEPA

14 July 2006

Secretary Stephen R. Prichard
EOEA, Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston, MA 02114

I am pleased to have the opportunity to offer my perspective regarding the COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN (CWRMP) recently submitted by the Town of Acton.

As a long time residents of Acton, over forty years, my family and I arrived while I was still on active duty as a commissioned officer in the United States Marine Corps. During an extended overseas absence my family chose to remain in Acton while our daughter was attending the Acton Regional High School. Upon my return and subsequent retirement from active military service Acton became our home town and my family and I intend to remain here into the future .I have mentioned a small piece of my background with regard to living in Acton because I believe the time span cited adds validity and substance to my views about the subject matter of this report.

My history with "water issues" in Acton extends easily over the past two decades or more and as a citizen of Acton I have had the opportunity to actively participate in a number of Town Advisory Committees. As a member of the Steering Committee of the original Acton Sewer Committee which successfully completed the first municipal project in Acton, the Middle Fort Pond Brook Sewer District, I was also one of the three member sub group responsible for Public Communications for the project. This project presented Acton with many varied and shifting thresholds, both at the Town and State level, which I am pleased to state were all met successfully as can be verified by the outstanding operational performance of the treatment plant, the collection system and operative cost to the townspeople within the district. The vision exhibited by the Steering Committee with respect to facilities and systems of this district have provided an excellent foundation for continued proactive positive actions in identifying, addressing and solving future water resource need in Acton.

Being a member of the Steering Committee mentioned above provided a natural migration as a member of the Citizens Advisory Committee, CWRMP slated to work with both the Town's Consultants and members of the Town's Health Department in the related comprehensive water project. This combined effort also had to overcome time delays, changing requirements and other obstacles in drafting and publishing a final report.

The COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN, in my view, offers a solid basis, with vision and breadth of options, for the Town of Acton to address a broad scope of water issues which it is likely to face in the future. It recognizes that there is no single option or solution to all water issues; that a variety of different factors may apply in more than one instance, but cannot be considered common to all; that in certain instances some solutions may have unique requirements; and, that environmental conditions and requirements and operational techniques will continue to change. This plan contains the vision to be implemented over an extended period, taking into consideration urgent water solution needs within certain areas of town, longer range environmental requirements, future funding requirement and the health and welfare of the citizens of Acton. It perhaps needs to be said, but this is a twenty-year plan which over those years of implementation must provide a "base line for action", but be flexible and adaptable to be useful. In my view, it is that kind of plan.

Along with and as part of the Comprehensive Plan I also participated in a small sub-group called the INDIRECT POTABLE REUSE WORKING GROUP. The purpose of this group was to examine the criteria and potential feasibility of putting treated waste water effluents into a Zone II of a well field. While this techniques is in use in some areas it is relatively new and has a number of important factors which would need to be considered before any implementation.

The time to pursue this issue by this group was limited because of the time constraints of the larger Plan. However, even considering this factor, INDIRECT POTABLE REUSE is a feasible options for the future of Acton and should not be summarily dismissed , because it has a "bad taste and doesn't sound good". To those critics who immediately list all of the contaminant which, in one way or another, enter our in-ground drinking water supply as a reason not to even consider INDIRECT POTABLE REUSE, I cannot agree. I also cannot agree with their logic that we can't use INDIRECT POTABLE REUSE because there may be other unknown contaminants.

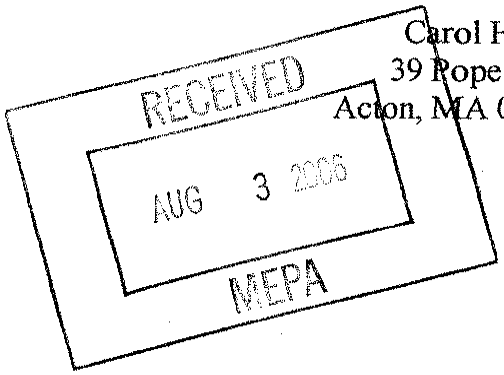
In my view, Acton's opportunity within the time frame of the Comprehensive Plan provides sufficient time to design and implement a trial of INDIRECT POTABLE REUSE to gauge its effectiveness as a option to the continued supply of water for Acton into the future. Science is presently aware of many contaminants in our world which affect the quality of our drinking water, but to think or worst yet believe, that there won't be additional ones in the future is unrealistic. If we design and implement the test for all the presently known items part of the test must be on the watch for other questionable or suspicious items that are encountered during the test period. It seems perfectly logical to me that that is the basis and reason we conduct test.

There is one final comment that I would like to offer. Having worked closely with the senior members of the Acton Health Department, namely Doug Halley, Director and Brent Reagor, Deputy Director for a number of years on a variety of water issues, I was continually impressed during the CWRMP with the dedication, attention to details, cooperative nature and willingness to add additional effort exhibited by both individuals. Certainly, their contribution to the Comprehensive Plan is a positive step in the right direction for Acton and it's water and it's future.

Sincerely,

W. Arthur Gagne
16 Francine Road
Acton, MA 01720-3611

Carol Holley
39 Pope Road
Acton, MA 01720



Secretary Stephen R. Pritchard
Executive Office of Environmental Affairs
Attn: MEPA Office
Anne Canaday
100 Cambridge Street, Suite 900
Boston, MA 02114

August 1, 2006

Re: EOEA #13828

Dear Ms Canaday,

Enclosed are my more detailed comments on the Acton Phase II Comprehensive Water Resources Management Plan. While the Town and its consultant have done a thorough and commendable job of public outreach and information, I have found the following overarching and significant problems with this document:

- Even though at least half the town will remain on private septic systems, no provisions for water conservation (other than the Acton Water District's efforts) or for public education on the care and maintenance of septic systems is offered. The proposed wastewater management districts will be run by the sticks of increased regulation and fees; there are no carrots for good stewardship.

- A large percentage of the town's conservation and recreation land are noted as "high priority needs areas", even though they generate no wastewater, nor are they likely to do so in the future.

- Two emphasized solutions, the use of a conservation-restricted field and the employment of Integrated Potable Reuse, are not currently legal, nor do I believe they should become legal in the future.

- The parameters used to determine areas in which septic systems are failing (bacterial count in surface waters, primarily) or are likely to fail lack scientific certainty.

I urge the EOEA to reject this document until these shortcomings have been remedied.

Sincerely,

Carol Holley

Acton CWRMP PHASE 2
Page-by-page Comments

CWRMP Report

ES-1 watershed health – "considerable discussion and effort were involved in assessing the CWRMP's role in the long-term sustainability of Acton's overall watershed health"; however the process didn't adopt the recommendations noted in Riverways Programs comments on Phase 1:

Commonwealth of Massachusetts Riverways Program. "The holistic, integrated planning in this document could be improved by the addition of a section detailing the hydrologic budget of each subwatershed." These subwatershed budgets have never been determined or detailed; the CAC and/or municipal government and/or consultant deemed the effort too costly. The second page of this document is missing from the Appendix; however, on page 2 of my personal copy the Program notes "wastewater flows from the failing lots were estimated based on a four bedroom home even though the Town's average population density was reported to be 2.6 people per home earlier in the report". I do not believe that any adjustment to wastewater flow figures has occurred, but it would certainly make sense to consider alternative figures. Many single-family homes in Acton are not utilized to full capacity and, given general demographic trends, it is unlikely that they will be in the future – a four-bedroom home, assuming Title V's two people per bedroom, yields two parents and six kids.

ES-2 Public and environmental health problems should be given more weight than economic development potential in prioritizing needs areas; it is more important to eliminate immediate threats than develop more retail and office space.

ES-4. "...we recognized the value of the W.R. Grace property...but ultimately did not choose to analyze the site because EPA's Record of Decision...had not yet been issued." The first draft of this Phase 2 document was dated approximately six months after the RoD was issued; perhaps there is another, more valid reason why this expansive parcel was not investigated that is not noted in this document.

ES-4 "...we do not recommend further hydrogeologic study at this time". Perhaps further hydrogeologic study of the WR Grace site should be recommended, since this large parcel was not considered in the original work.

ES-5. "Recharge/reuse of reclaimed water was investigated by a subgroup of the CAC...reuse of highly treated wastewater treatment plant effluent was viewed as a potentially feasible aquifer recharge method, contributing the preservation of the hydrologic cycle. The Group suggested that further exploration of this alternative was warranted, and recommended that the first step of this further study could consist of a small scale pilot study at the Adams Street WWTF...." This recommendation has been contested by some members of the Group.

ES-5. Non-Structural Solutions. Public education is not among the non-structural solutions proposed. This is unfortunate and inappropriate. As "Onsite Septic Systems: Educating the Homeowner" by Caigan M. McKenzie (*Small Flows Quarterly*, Winter 2002, Volume 3, Number 1, p.14) states, "Lack of information is a common reason homeowners don't maintain their systems."

ES-8. "The Engineer's opinion of conceptual-level costs for design and construction of the sewers to the West Acton Center-A and Spencer/Tuttle/Flint area is...." These areas should be separated out, as they are prioritized for different reasons; one is an environmental and public health problem, the other is an area projected for economic growth. If they are lumped together in order to achieve an economy of scale, this should be so stated in an explicit manner.

1-4, 1.2.1.1 Water Conservation. "The AWD has been actively engaged in water conservation programs for several years. These programs include...water use restrictions." However, from 1991 to 2001, 176 permits for private wells were issued by the Board of Health (per figures available in Acton Town Reports), many of which are for irrigation purposes to bypass AWD restrictions.[1] The installation of these wells renders water usage untrackable, and lessens the overall value of conservation measures.

1-5 1.2.1.2. Surface Water Monitoring Program. "Samples from the 47 sites were initially analyzed for fecal and total coliform counts. The intent of the sampling program was to monitor for failing onsite wastewater systems." Even with narrowing the parameters to fecal coliform, this methodology is misleading. Acton is fortunate to be rich in wildlife, but, like humans, wildlife defecates, thereby generating fecal coliform. Beavers use waterbodies for toilets. Acton has a substantial population of Canada geese, mallard ducks, and gulls; other water-loving mammals include mink and otter. Reptiles and amphibians as well as fish also inhabit many waterbodies. Further, many dog owners take advantage of conservation land, streams and ponds to exercise their pets, who may relieve themselves on stream banks; canine fecal matter has a remarkably high bacterial count. Without rather costly DNA testing to determine the species from which the coliform has emerged, stating that surface water coliform counts indicate failing septic systems is an improperly founded conclusion.

Page 1-5 1.2.1.3 Ground Water Monitoring Program. "The town recognized that monitoring of the groundwater for nitrate levels would be beneficial to monitor the impact of onsite wastewater systems." Could the significant use of lawn services in Acton, with their applications of fertilizers, impact nitrate data?

Page 1-6. 1.2.1.5 Other Initiatives. Reclaimed Water Reuse. The language in this section does not agree with the language regarding IPR in the Executive Summary. The Executive Summary recommends initiation of a pilot study installation but this section does not.

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[1] Interestingly, the number of private water supply wells in Acton is noted as "0" on page 5-32 of the Phase 1 report, indicating that "No information on number or location of private wells available."

Page 1-7. 1.2.2. Phase 1 CWRMP Report Summary. "To determine areas in need of wastewater disposal solutions, specific data were evaluated, including system age, repair history, septage pumping records...private well locations, parcel size..." Yet, Phase 1 indicates no zero private wells (see footnote to Water Conservation, above). Installations of private wells for irrigation still have to maintain 100 foot setback from leaching areas, per regulations. Therefore, it is possible that installation of a private well for lawn-watering could adversely impact the feasibility of an on-site septic system repair. From 1991-2001, 176 permits for private wells were issued by the Acton Health Department.

Page 1-9. 1.3 PUBLIC OUTREACH. The public outreach for Phase 2 has been a multiple-orders-of-magnitude improvement over the outreach for Phase 1, and people involved in this effort are to be commended. That being said, it is unfortunate that the comment period for both documents occurred over summer vacation, when access to public repositories is limited due to cutbacks in library hours, and when many people who would be interested in commenting are on vacation. Written invitations to a public meeting held in late 2005 were mailed only to the Spencer/Tuttle/Flint neighborhood, an area with a strong interest in being sewered.

Page 2-4. Table 2-1: Technical Criteria for Phase 1. Under "Regulatory Minimum Setbacks" Private Well is just above Vernal Pools. Given other information noted above, it is possible that installation of a private well for lawn-watering could adversely impact the feasibility of an on-site septic system repair.

Page 2-4. Table 2-2: Non-Technical Criteria. Why aren't "Ability to implement solution" and "Protection of environment" technical criteria, particularly when setbacks to vernal pools, floodplains and wetlands are considered "technical criteria"?

Page 2-5. 2.3.1.2 Phase 2, Finalize Criteria Ranking. "The CAC agreed the Needs Planning Areas identified at this point are in need of new solutions from a technical needs viewpoint." However, some of the Needs Planning Areas have large parcels that generate no wastewater because they are open space. In particular, those open space parcels that are designated Conservation Land should be eliminated from these areas. A comparison of Figure 2-3 in the Phase 1 document with Figure 2-3 in the Phase 2 document is recommended to determine appropriateness of needs area delineation.

Page 2-6. 2.3.1.2 Phase 2, Growth. North Acton Village, while still without a Village Plan, should have been included.

The Secretary's Certificate for Phase I noted:. *Subsequent Phase Reports.* "For each phase the filings should identify the need for corrective measures and growth management strategies..." The Phase 2 report identifies corrective measures but not growth management strategies. Sewering, in the face of 40B affordable housing unit dense developments, actually eliminates growth-management-by-perc rate, a time-honored method in Acton.

2-8. 4. Reuse-recharge. "Wastewater effluent discharge for the purpose of recharging drinking water aquifers may also be a long-range option." Given the constant flow of information regarding emerging contaminants in wastewater, including but not limited to pharmaceuticals and pesticides, this solution should not even be considered until testing methodologies and treatment systems for emerging contaminants are readily available and economically feasible. Further, Acton's aquifers, particularly in the area of the WR Grace Superfund Site, are particularly rich in groundwater and do not, under current buildout scenarios, require treated wastewater to recharge them. Also, not all of Acton's drinking water comes from the same aquifer/wellfield; how will the others be recharged?

While there is a perfunctory nod to Low Impact Development in this document, the Planning Department in the Spring of 2005 issued a memorandum claiming that LID methods are not implementable in Acton, and in fact "lead to sprawl". Exactly how LID methods lead to sprawl was not clear; in fact, LID methods are explored and encouraged in the East Acton Village Plan. The Health Department's position on LID is unclear.

Figure 2-3 Priority Status of Needs Planning Areas. There are several large parcels colored red, for High Priority, in this figure that are colored green, for Open Space and Town/State Owned lands in figure 2-3 of the Phase 1 report. As a rule, open space generates no wastewater, so open space parcels should be recolored. Coloring these parcels red inflates the visual impact of needs areas.

Page 2-20. 2.5.3 Wastewater Management Districts. Given the amount and expense of enabling legal work and bureaucratic infrastructure required for the higher, more intrusive levels of this solution along with the fiscal issues currently facing the Town, and given the documented success of public education programs in the wastewater management literature, it is unfortunate that aggressive public education alone was not explored; in fact, it wasn't explored at all.

Page 2-20. 2.5.4 Cluster Systems/Package Plants. Cluster systems with effluent recycling should be further explored for commercial growth areas.

Figure 2-5. Disposal Sites for High Priority Needs Planning Areas. Some parcels are colored red, for High Priority Needs, and are also colored to indicate they are a solution to high priority needs parcels, which is somewhat oxymoronic.

Page 2-24. 2.6.1. Preliminary Hydrogeologic Study – Potential Disposal Locations

Recommendations. "we do not recommend further hydrogeologic study as part of the CWRMP..." Given the change in status of the WR Grace site, hydrogeologic study of that large area should be recommended.

2.6.2 Reclaimed Water Use. There is no need to do more than continue to monitor journal articles and research regarding this methodology. Indirect Potable Reuse (IPR) is implemented primarily in the arid Southwest, not the soggy Northeast, as a supplemental water supply. Acton has no need to take this public health risk. IPR in Acton, if ever

implemented, would be purely a means of disposing of wastewater, with recharging an already-contaminated but water-rich aquifer with new contaminants an unfortunate side effect. Is the solution to dilution really pollution?

Page 2-25. 2.6.2.1 Implementability Issues "until regulations reduce the limit on travel time…." Travel time regulations are promulgated to be protective of public health. What would the health effects be of reducing these travel times? Is it appropriate or wise to do campaign for loosening of public health regulations in lieu of imposing further water use restrictions and/or implementing a wide-reaching public education campaign?

Page 2-30. 2.7.1.2 Implementability Issues. "The most significant obstacle to the implementation of Wastewater Management Districts in Acton is the need for the program to be self-sustaining and possibly revenue-generating." Any revenue-generating in the Wastewater Management system should not be on the backs of the already-overburdened residential taxpayers, but on licensing fees for the pumpers and contractors, who will get more work as a result of this program.

Page 2-29. 2.7.1.1 Existing Program. Note the lack of public education on the care and feeding of septic systems in the existing program. The education effort discussed is a campaign the creation of the management districts, not a component of the management program.

Page 2-34. West Acton Center (12). The third bullet, regarding Gates and Douglas Schools, states "If the design flow is between 10,000 gpd and 15,000 gpd an upgrade, with technology able to meet Class 1 Groundwater standards from 314 CMR 6.00, is required if the system is in a nitrogen sensitive area, in failure, or flow increases." This parcel is not in a nitrogen sensitive area[2], nor is the system in failure, and in fact, due to conservation measures, the flow has apparently decreased. This bullet is somewhat misleading.

Pages 2-34 and 2-35. In discussion of options for West Acton, the aesthetics of mounded systems seem to be more important than the aesthetics of mounded systems in Indian Village, but it is not clear why these systems are acceptable in one area but not another.

Figure 2-10. East Acton Potential Disposal Locations. It should be noted that the two "Public Water Supplies" denoted in immediate proximity to Route 2A are in fact private wells serving condominium complexes[3] and that both Concord and Acton public water supply mains run along Route 2A. If necessary, these wells could be abandoned and decommissioned according to State guidelines[4] in order to facilitate the construction of

[2] Title V, Section 15.215: Designation of Nitrogen Sensitive Areas. "The following areas have been determined by the Department to be particularly sensitive…(1) Interim Wellhead Protection Areas and mapped Zone Iis of public water supplies….(2) Nitrogen sensitive embayments…"
[3] See Table 6-13, page 6-14 in the Phase 1 report.
[4] Acton has no health regulations for decommissioning private wells; General Bylaws state only that they require a cover that supports a certain minimum weight.

clustered systems. The same could be said for wells at the Strawberry Hill Road and Wampus Avenue complexes.

Page 2-40 2.8.3 Public/Private Partnerships and Cluster Systems. "Suburban Manor" has been under a new name and new management for several years – changing to the appropriate name was a comment on the Phase 1 report as well.

Page 2-43. 2.8.4 Wastewater Management Districts. This section notes the need for mounded systems in Acton Center, which is an Historic District and aesthetics are governed and subject to stringent regulation. For some reason, this report concludes mounded systems are not as problematic where they are in fact prohibited for aesthetic reasons in Acton Center as they are in West Acton, where they are not prohibited. Logic might indicate that it should be the other way around.

Page 3-3. West Acton Center A (12) and Spencer/Tuttle/Flint (10). It is unclear why these areas are lumped together. West Acton Center (A) seems to have primarily issues of aesthetics and economic development, while Spencer/Tuttle/Flint residents complain of backups, breakouts, and the need to carefully monitor water use – they believe themselves to be in a state of crisis, not unlike Faulkner Hill Road and environs in the original sewer district. They have come before the Selectmen and the Board of Health asking for Title 5 waivers because the status of their septic systems could preclude a real estate sale. Further, this area was included in the original sewer district, and West Acton Center was not. It is strongly recommended, therefore, to separate these areas into two discrete projects.

Figure 3-2. Proximal Sampling Points for Potential Wastewater Management Districts. Areas around these sampling points should be monitored for wildlife activity, and if unusually high coliform counts are noted, DNA testing on the bacteria should be performed to confirm human origin.

Page 3-8. Table 3-2: Examples of Range of Wastewater Management District Options. It is interesting to note that conservation options like dual-flush toilet and clivus mulcrum or other composting toilets are not mentioned. In fact, adding another row to this table entitled "Mandatory Conservation Measures" might be appropriate and could include many other low-water use devices.

Page 3-12. 3.2.1 Sewer Extensions. "Allocation of costs would be based not on the present uses of properties but on the zoning potential of each property." This policy has had unfortunate results in the original sewer district, with a proliferation of homes on marginal lots and dense Chapter 40B developments. It is particularly burdensome, financially, to senior citizens. It is unclear whether or not putting a part of a large parcel under a Conservation Restriction would mitigate the allocation of cost on that parcel.

Page 3-12. Sewer Extension Costs. It is difficult to determine, especially with the introductory caveats, if this section is at all useful or has any relation to future realities. Members of the Acton Finance Committee and other citizen fiscal watchdogs have

expressed strong concerns regarding the financial analyses performed for this document; this commenter yields to their superior expertise.

Page 3-19. 3.2.3.1 WWMD Costs. There are no noted costs for educational pieces or mailings or staff to create them, because there is no education involved in this solution. This is unfortunate and inappropriate. Among many other publications, "Onsite Septic Systems: Educating the Homeowner" by Caigan M. McKenzie (*Small Flows Quarterly*, Winter 2002, Volume 3, Number 1, p.14) states "Lack of information is a common reason homeowners don't maintain their systems." "Pollution Prevention Fact Sheet: Septic System Controls" (accessed on July 10, 2006 at http://www.stormwatercenter.net/Pollution_Prevention_Factsheets/SepticSystemControls.htm) states "Public outreach and training are vital elements to the control of septic system failure. Many of the problems associated with improper septic system functioning may be attributed to a lack of homeowner knowledge on operation and maintenance of the system."

Page 3-20. Table 3-6: Summary of Level 4 WWMD Estimated Setup and Operational Costs. Interns and volunteers should be leveraged to help meet staffing needs and lower costs. Acton enjoys a large cadre of well-educated retirees and promotes a volunteer program for real estate tax relief. Use of part-time staff, to eliminate benefits costs, is another option.

Appendix B: Citizen's Advisory Committee Minutes and Public Outreach Material

Woodard & Curran Inc. Meeting Minutes, June 3, 2004.
"Q. Are I/A systems suitable to control building booms similar to growth seen in some areas of Acton? A. On-site I/A systems are similar to septic systems in that they are considered temporary solutions. Once a sewer is built abutting a property, the property has 90 days to connect." Since this commenter was the poser of the question, further explanation is appropriate. First of all, none of the CAC members knew what an 'I/A system' was, which was somewhat disturbing, since they had been involved in a wastewater management project, at this point, for some years. Second, the statement that septic systems are considered 'temporary solutions' seems odd, since septic systems will remain the solution for a great deal of Acton. Third, to the best of my knowledge, there is no legal requirement for a parcel with a functioning septic system to connect to central sewers within 90 days – unless it's an I/A system, which would make I/A systems NOT similar to traditional septic systems. Woodard and Curran did offer to provide the CAC members with a packet of information on I/A systems for their next meeting.

Woodard & Curran Inc. Meeting Minutes, July 15, 2004.
"C: There seems to be an assumption that there is no net loss to the aquifer by sewering because the sewered area is outside of the drinking water aquifer recharge areas. If we are to expand the use of the WWTF then there could be a net loss to the groundwater system.

R: Recharge of aquifers is an important issue, whether through recharging of stormwater or wastewater. Subsurface discharge is considered an alternative for satellite treatment systems." The response neither confirms nor denies the comment. However, the responder took the opportunity to place an advertisement for Indirect Potable Reuse. Further, the Acton Water District draws from multiple wellfields, some not proximate to the proposed sewer district.

Project Summary Report to CAC/Town of Acton, Massachusetts/Comprehensive Water Resources Management Plan/Environmental Impact Report/Phase 1 Review and Phase 2Kick-off
CAC Meeting – July 15, 2004

Page 4. "The availability of ***implementable*** *solutions will govern the final recommended solutions. When considering potential solutions, regulatory, political, financial and popular opinions play a role, and will include the following issues presented during the June CAC meeting:*

- *Ability to "sell a project at Town Meeting... "*
- *Perception of potential discharge in Zone II of public drinking water wells...*

It is interesting to note that the first two criteria for implementability are political, not technical/environmental.

"Two other important criteria are required to be considered when selecting potential solutions to wastewater and disposal needs.

- *The solution should be consistent with the community's Master Plan, Open Space and Recreation Plan, and other local planning documents."*

Other than the emphasis on economic growth in Village Districts, there is not evidence this criterion was considered; in fact, many open space priority parcels are classified as high needs areas.

Minutes of CAC Public Information Meeting, November 16, 2004.

Page 2. "Q: How do you determine the needs of undeveloped lots?
A: Board of Health data is available on developed lots only. The state and the Natural Resource Conservation Service (NRCS) have other data such as soils characteristics, wetlands, floodplains, and vernal pools. The Project Team correlated the NRCS soils data with Board of Health data and then extrapolated the data to other lots with similar soil types." Given the major discrepancies between NRCS soil data as demonstrated in figure 5-10 of the Phase I Report and Board of Health data in Figures 5-11 and 5-12 of the Phase I report, using NRCS data, extrapolations may or may not be an accurate method of determining a parcel's suitability for an on-site wastewater disposal system.

Page 3. Views from the Citizens Advisory Committee. "The Adams Street wastewater treatment facility (WWTF) was designed and constructed to be expandable and perform properly at all levels of flows. The effluent exceeds the level of treatment mandated by its discharge permit." The only effluent parameter cited here is Phosphorous. A complete

characterization of effluent using drinking water parameters should be performed, especially before any serious discussion of IPR is initiated. The resulting data should be made easily available to the public.

CAC Meeting Minutes April 20, 2005.

"I. Connect to the Existing System... R: Audubon Hill's onsite system problems have been corrected, so this can be omitted from the priority ranking. This was considered a priority location by the CAC because the senior center system was in failure." One wonders how many other system problems could fall under this category.

"C: A public education program could be instituted it ensure (sic) that existing systems do not fail.
R: ... The Health Department sent public education mailings in the past, but homeland security requirements have take (sic) much of the available time and budget for these activities". It is difficult to believe that an occasional educational column in the Municipal Quarterly, which is mailed to every taxpaying household in Acton, is precluded by Homeland Security activities. Further, the Septage Management Fund should have adequate financial resources for at least a modest educational campaign, and volunteers and student interns could provide the labor.

CAC Meeting Summary, Meeting Date: August 25, 2005

Needs Area 3 (East Acton Village):
Q: What are the expected wastewater flows?
A: We estimated wastewater flows along the Route 2A corridor at approximately 280,000 gpd using Title 5 Values.
It is unclear whether estimated wastewater flows were for current or potential uses, given the rezoning along a section of Route 2A due to the East Acton Village Plan.

November 1, 2005 Board of Selectmen's Meeting. Presentation: Where Are We Now? Status of the Acton CWRMP

"Special Town Meeting – Fall 06. Articles for design and construction funding for West Acton Sewer Expansion: Douglas/Gates Schools, West Acton Village, Spencer/Tuttle/Flint Roads Neighborhood. One of the highest priority areas, even before the process fully began, was the West Acton Village Area". However, according to this document, West Acton Village is not in a state of environmental or public health crisis due to failed septic systems. The priority is based on economic development and regulatory pressure.

Municipal Quarterly, October 2005. "Planning for Future Wastewater Needs".

Apparently there is time and money after Homeland Security efforts to write extensively about a planning process, but not enough time to write education pieces on proper septic system care and maintenance for this publication.

CAC Meeting Minutes November 15, 2005

Q: What is the problem the working group was trying to solve by investigating indirect potable reuse?
A: The issues are of supply of drinking water and disposal of wastewater. For supply, The Nashoba Brook Basin is listed as a stressed basin and the Massachusetts Water Resources Commission is developing new withdrawal limits for stressed basins". The IPR project proposed by the CAC is across town from the Nashoba Brook Basin, and will recharge an already-rich aquifer near the Assabet River.

Q: Can the schools be sewered while avoiding sewering properties in West Acton Center?
A: No, current state requirements are to allow connection to the sewer by any property that abuts the sewer as long as capacity exists in the system. For new systems, we can not plan to skip properties.
The initial pipe ran past properties that were not in the sewer district and therefore not allowed to hook up. What is the legal status of their right to hook up given newer regulations? If these regulations require a right to hook up, it follows that every property that the sewer pipe passes is required to pay a betterment, even if that property enjoys a recently installed on-site system.

"High Street....The area is located on the same parcel as the High Street well field and the Assabet wells." It is assumed that the Assabet wells are located on what is being referred to here, for unknown reason, as the "High Street well field". This nomenclature is confusing to the general public, who is familiar with the "Assabet" wellfield because of WR Grace site issues.

"Q: When do costs become part of the equation?
A: Costs are part of the evaluation. The ranking of the alternative includes costs as a qualitative consideration at this point. In the case of the Douglas and Gates schools the School Department will contribute toward a centralized collection system in the amount it would cost to construct an onsite system, so the costs are not a consideration for the schools." If the existing onsite systems are functioning properly and do not need replacement, this statement is highly misleading, as there are no costs to be incurred at this time or in the foreseeable future.

Clarification on the Town vote to accept the CWRMP/EIR: The State does not require Town Meeting approval of the CWRMP. However, a great deal of staff and Board of Selectmen time and other municipal resources was spent on a political campaign to get acceptance through Town Meeting. Perhaps this time and money would have been more effectively spent on a public education campaign on septic system maintenance.

Final Report of the Indirect Potable Reuse Working Group, November 15, 2005.

After much discussion, four major areas of concern emerged... Coupling implementation with increased water conservation and emerging contaminant source reduction efforts." What reason is there to not **de**couple implementation and just practice increased water conservation and emerging contaminant source reduction efforts? Increased water conservation could render IPR unnecessary.
Background. "The Group performed its duties under the following mission statement: 'To evaluate the potential feasibility of the implementation of Indirect Potable Reuse of highly treated Wastewater Treatment Plant effluent through a discharge to the Zone II of a wellfield; the group will examine the issue from the "human" perspective, looking at the political and public relations impacts of any proposal." Whose mission is it to examine the issue from a public and environmental health perspective? This mission statement makes the IPR working group sound like a marketing strategy committee.

"Indirect Potable Reuse is only one facet of the larger concept of reclaimed water use." Why were the other facets of the larger concept not explored?

"As Acton is both regulatorily and environmentally limited for surface discharge locations, subsurface discharge must be the primary option examined. Subsurface disposal of treated wastewater requires soils with high permeability....As Acton is solely reliant on groundwater aquifers for its public water supply and those aquifers are in the most permeable soils..." This paragraph essentially states that Acton needs to discharge its wastewater into the drinking water supply aquifer because of the percolation rate. No mention of need to recharge the aquifer is made, because that need is nonexistent.

Discussion....The Four major areas of concern are:

1) *Detection, removal and potential health effects of multiple classes of emerging contaminants.* Results of the Johns Hopkins study are not available because the graduate student performing the study has not analyzed the samples yet –more than a year after they were delivered to him[5]. Given that this analysis was for "emerging contaminants", is it known how long a sample remains viable? *2) Timing of implementation in regards to technological, regulatory, and political timelines.* In other words, regulations currently prohibit this means of wastewater disposal in Massachusetts.

"Coupling implementation with increased water conservation and emerging contaminant source reduction efforts. The possible implementation of an Indirect Potable Reuse project in Acton, and the public participation and education campaign that would precede such a project, could offer a unique outreach opportunities (sic) to promote citizen involvement in the protection of water resources." It is shameful that such a campaign could not be conceived independent of the IPR project.

[5] Per email from this graduate student to me.

Recommendations....It could serve to recharge aquifers within "stressed"basins and it addresses one of the primary components of the Massachusetts Water Policy, which encourages "keeping water local" by preserving the local hydrologic cycle." The Zone II recommended for IPR is NOT in a stressed basin; in order to "keep water local" you would have to proportionately recharge all aquifers of origination. There are several public wellfields in Acton.

The "local" answers to the questions that arise under these four areas may only be fully answered with a small-scale pilot project....This project would require funding appropriations... " How many public education campaigns on water conservation and septic system maintenance could be funded by monies suggested for this pilot project?

"Indirect Potable Reuse... holds much promise, not only for the Town of Acton, but for many other communities across New England, as the reality of the scarcity of our liquid reserves becomes readily apparent." New England has no lack of water; it lacks CLEAN water. Indirect Potable Reuse will not help clean up contaminated aquifers.

December 8, 2005 Public Information Meeting
2)

"Q: Residents in the Spencer/Tuttle/Flint neighborhood petitioned for connection to the sewer.....Can the schedule be expedited so that the Town votes in April to appropriate money for the sewer?
A: The first step is to accept the report...." However, there was no need for the Town to accept the report, as stated in previous meetings (see comment on p. 10).

CAC Meeting Minutes, March 16, 2006
"Ms Holley... requested that further public education become a priority... She indicated that this is a necessity. Doug Halley agreed, and stated that this was an ongoing initiative that began before Phase I." However, at the April 20, 2005 meeting, Mr. Halley stated that ongoing Homeland Security efforts had precluded any public education efforts; no tangible public education pieces have been forthcoming from the Health Dept. for several years.

March 27, 2006 Board of Selectmen's Meeting. "Phase II is Complete....Addresses the Greatest Risk to Acton's Water Resources: - How We Dispose of our Wastewater". This slide ignores the WR Grace Superfund Site, which has contaminated our richest wellfield for over 30years and continues to do so; it also ignores the gas stations near the Conant wellfield and the golf courses near the Conant and Kennedy wellfields, the infiltration of ice treatment chemicals into groundwater, several 21E sites, etc. Wastewater disposal is **one of** several large threats to Acton's aquifers.

Excerpt of the Annual Town Meting Held Monday, April 3, 2006, 7:00 PM...
"ARTICLE 31 ACCEPT COMPHRENSIVE WATER RESOURCES MANAGEMENT PLAN REPORT....subject to the express conditions that: (a) the Draft Report shall not

obligate the Town to undertake any particular project or projects or other course of action that may be described in the report... "
This unusual caveat was added in order to convince many of the plan's opponents to vote to accept the plan, even though they had serious reservations regarding content and recommendations.

Appendix E. Hydrogeological Study.

The figures accompanying the hydrogeologic study are scans of photocopies and difficult to impossible to read.

APPENDIX F. Indirect Potable Reuse Working Group Report.

"Timing of implementation in regards to technological, regulatory, and political timelines... acceptance of IPR at the state and federal levels will also greatly impact any possible implementation or exploration." This appendix is a 248-page exploration of a currently impossible (because it's illegal) solution, as opposed to zero-page explorations of the legal and encouraged practices of conservation and education.

"The plant consistently discharges effluent with a Total Nitrogen of less than 3 mg/L..and 0 colonies of fecal coliform bacteria." At a public information meeting, I asked what other parameters were tested for, what the results were, and that they be posted on the Town's website. I got a list of parameters but was told by the Health Director that posting results had to be done in such a way to allow the "general public" to understand them. There are many components of treated wastewater besides the two noted that are not emerging contaminants and that do have adverse health effects.

"Coupling implementation with increased water conservation and emerging contaminant source reduction effort... The possible implementation of an Indirect Potable Reuse project in Acton, and the public participation and education campaign that would precede such a project, could offer a unique outreach opportunities (sic) to promote citizen involvement in the protection of water resources. Awareness of the consequences of waterborne disposal of personal care products and pharmaceuticals could lead to a reduction of those products which, along with their metabolites and by-products, make up the classes of emerging contaminants mentioned previously, in the waste stream. As with any other water resources based initiative, it would offer the opportunity to augment the already successful education efforts undertaken by the Acton Water District." There is no apparent reason why a marketing campaign for Indirect Potable Reuse offers unique outreach opportunities for educational campaigns, as opportunities for educational campaigns exist already. There is information, there is a public that could benefit from it, and it is being withheld for unknown reasons.

This appendix contains over 200 pages of information on the joys of Indirect Potable Reuse. There are zero pages in the entire CWRMP package devoted to conservation or public education regarding septic system care and maintenance.

APPENDIX G: POWDERMILL STUDY.

The wastewater treatment plant at Powdermill Plaza has not worked properly pretty much since its construction; it's a very positive step to hook this development into the Acton WWTF. Since the Acton WWTF's treatment parameters are superior to those allotted the Powdermill WWTF; it is possible to offer any kind of TMDL credit to the Acton WWTF that would allow for increased design flow at the original filter beds?

TOWN OF ACTON WASTEWATER MANAGEMENT PLAN.

There is no date on this document; it appears to have been written before the construction of the Acton WWTF.

"Inappropriate uses, or discharges, speaks to the need to educate homeowners regarding their septic systems. The types of materials discharged and the manner in which they are discharged can have a detrimental impact on a system. ...

3. *Educational Program*

   Develop a series of educational brochures for
   Water Usage
   Septic System Maintenance
   Dangers of Chemical or Biological Treatments
   Garbage Grinders

   Mail brochures in quarterly newsletter

   Develop an educational program for schools
   Based on the "Oscar's Options" Program.

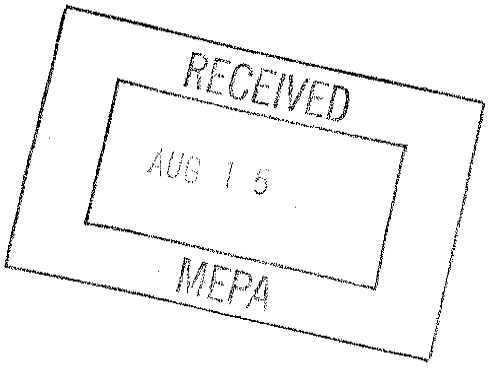
I stand corrected. There are not zero pages devoted to public education, there are two and a half pages, including the verbiage cited above and one side of an educational brochure that, I believe, is almost identical to the one in the Health Department office when I left employment there in 1989, and a flyer. None of the components of the educational program outlined above have, to the best of my knowledge, been implemented. I believe that this plan was written before September 11, 2001; therefore, the "homeland security" efforts cited in another appendix as precluding development of public education had not yet been initiated.

There are comments and responses from a CWRMP meeting, and written comments on the Phase II document, at the end of this Appendix volume that appear to be misplaced.

It is difficult to reference pieces of appendices for comment, as there are no page numbers for the entire volume, just page numbers for some of the pre-published components.

AC

Secretary Stephen R. Pritchard
EOEA, Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston MA 02114



Re: Draft Acton Comprehensive Water Resources Management Plan (CWRMP)
Dated June 2006
Reference number: EOEA 13828
Sent by fax to 617 626-1181 (2 pages)

August 10, 2006

Dear Secretary Pritchard,

I am writing as a five-year member of the Acton Wastewater Citizen's Advisory Committee, a member of Acton's recent Indirect Potable Reuse Working Group, and a six-year member of the Board of Acton Citizens for Environmental Safety (ACES).

Regarding: Indirect Potable Reuse (IPR)

1. The IPR Working group met just four times: (The July 2005 meeting was cancelled.)
   - June 1, 2005: Introductory Meeting
   - June 30, 2006: Discussion of four articles was sent to working group for review
   - August 18, 2005: Tour of wastewater treatment facility. (I was unable to attend this tour.)
   - October 25, 2006: Committee provided feedback on Final Report that was drafted by Town Staff. A health Dept. emergency cut the meeting short. This was the last meeting of the IPR Working Group.

2. As a member of the IPR working group, I had an opportunity to read some technical literature that had been collected by our Health Department staff, and to discuss the role that IPR might be able to play in Acton's future water management planning. Given the 20 year planning period covered by the CWRMP, the working group concluded that the concept of IPR should not be excluded from the CWRMP report. In contrast, the Executive Summary and other portions of the CWRMP imply that the group recommended active pursuit of IPR, rather than just a reluctance to rule it out completely as an option. One member of the working group seemed eager to actively pursue IPR, but this was not the group's consensus.

3. The IPR working group had serious concerns about the many currently known and unsolved risks of discharging wastewater in close proximity to public wells, and the even greater number of emerging pollutants whose health impacts are only beginning to be investigated. These emerging contaminants include viruses, household cleaning chemicals, personal care products, pharmaceutical waste, and hormonal and endocrine disrupting chemicals. Some specific examples are:
   - Protozoan and viral pathogens found in water treated to meet current coliform treatment standards (Issues in Potable Reuse - http://fermat.nap.edu/html/potable/)
   - Persistence of household cleaning products such as ammonia in residential wastewater (US EPA Guidelines for Water Reuse - http://www.epa.gov/ORD/NRMRL/pubs/625r04108/625r04108chap2.pdf)
   - Presence of pharmaceutical substances such as Viagra and antidepressant medications in wastewater (Factors Affecting the Concentrations of Pharmaceuticals Released to the Aquatic Environment - http://131.230.120.111/updates/pdfn/V120_A7.pdf)
   - Presence of endocrine disrupting chemicals from such sources as birth control pills in wastewater (Endocrine Disruptors as Water Contaminants - http://swhydro.arizona.edu/archive/V2_N6/featurette2.pdf)

For each of these emerging contaminants, full knowledge is needed of their: Persistence, Mobility, Concentration, Hazardous breakdown products, Synergistic effects, Sampling protocols, Treatment options, and potential health effects.

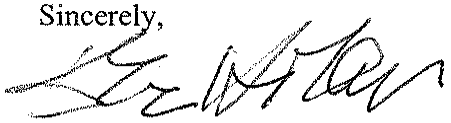
Given the complexity of the contaminant cocktail present in modern wastewater, treatment is very challenging. Current research shows that treatment that is effective for one contaminant can lead to an actual increased concentration of another class of contaminant, such as anti-microbial compounds. (Oppenehimer, DeCarolis, and Adham, *Integrated Membrane Bioreator and Reverse Osmosis Systems for Removal of Endocrine Disrupting Compounds, Pharmaceuticals, and Personal Care Products in Water reuse Applications, Condition Two Results*, page 10, September 2005, Reuse Conference, Denver, Colorado)

4. It was made clear to the IPR working group that the motivation behind looking at IPR was to address an anticipated future shortfall of wastewater disposal capacity if Acton continues to sewer parts of town. The Assabet public wellfield, near the Adams Street Wastewater Treatment Plant, is highly productive and not in need of additional recharge. In spite of this, the IPR working group Final Report and the CWRMP both imply that the drinking water aquifer is in need of recharge. Page 2-23 of the CWRMP report shows that the Assabet public wellfield (obscurely designated as the "High Street Parcel" in the report) was explored as a potential disposal site for Planning Area 13, comprised of the Indian Village neighborhood. Since the proposed discharge location lies within a two-year travel time from the wells, this disposal site was not recommended as a solution for Area 13. However, the report does not clarify that the disposal location as been discarded, although this point has been confirmed verbally at public meetings. I have a serious concern that in the future, town officials and staff may refer to the CWRMP report and mistakenly interpret the diagrams and findings regarding the "High Street Parcel" as a recommendation of conducting an IPR project at that location. I request that the report clearly label that alternative as having been investigated and rejected, and that the language of the report should match the clarity of the verbal comments that the consultants and staff have publicly provided.

5. During the final meeting of the IPR Working Group, the three citizen members in attendance were reviewing the text of the final report, which was drafted by Town Staff. Near the end of the meeting, one of the members proposed that the report should include a concrete recommendation that the Town engage in a pilot study of IPR. Especially given previously cited concerns, the other members were not comfortable with such a change being introduced at such a late stage, without opportunity for further discussion.
The discussion of whether or not to include mention of a pilot study in the working group's report was cut short by a Health Department emergency, and the working group did not reconvene before the final report was issued. The report issued by the Health Department included a statement about the need for a pilot study to answer local questions about the feasibility of IPR, if the Town decided to pursue the idea. The members of the working group who disagreed with this recommendation were assured that such an investigation would not happen in the near future, and not without an endorsement by Town Meeting.
I documented concerns about IPR and the process by which mention of a pilot study became included in the final recommendations of the IPR Working Group, in a letter to the Board of Selectmen dated March 20, 2006.
At an Acton Board of Selectmen meeting on April 3, 2006, the Selectmen pledged that the Town had no immediate plans to pursue funding for a local pilot study for IPR and that the current Board of Selectmen would not do so in the future without first bringing the issue before a Town Meeting for public approval.

6. Especially given the working group's concerns about "emerging contaminants" I ask that the DEP not weaken current regulations about IPR. In the interest of balancing the public's health against the growing need for effluent disposal sites, please retain or increase the mandated two-year minimum travel time between IPR disposal sites and drinking water wells.

Sincerely,



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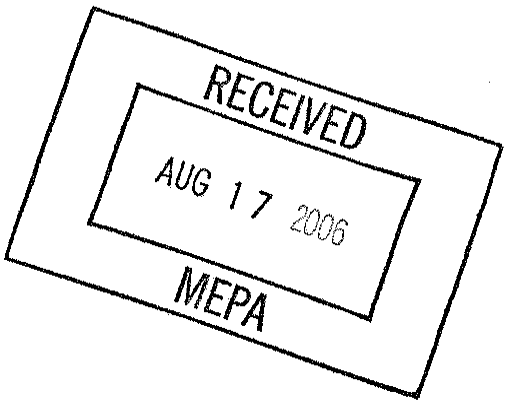


August 15, 2006

Ms. Anne Canaday
MEPA
c/o Secretary of Environmental Affairs
100 Cambridge St., Suite 900
Boston, Massachusetts 02114

Via USMail and email to "Anne.Canaday@state.ma.us"

Re: EOEA No. 13828/11781, Acton Comprehensive Water Resources Management Plan

Dear Ms. Canaday :

My apologies for the last-minute timing of this letter, unfortunately family commitments made it impossible for me to write it sooner.

First, I want to emphasize my support for efforts to protect our environment and especially our supplies of drinking water. My wife and have lived in Acton for more than 42 years, we raised four children here, we do not have any plans to move, this is our home.

I understand the genesis and the purpose of the comprehensive study of Acton's water resources. Having reviewed the report, I believe that it does contain some useful information for future planning. However, I think that the report as submitted to your office is seriously flawed. If its recommendations are accepted without revisions or comments, I believe that it will lead to well-intentioned but ineffective and wasteful measures which would do little to help protect our water supplies, that it is likely to be the justification for a misuse of limited resources which will do more harm than good.

The report makes very specific, unqualified recommendations for measures to be taken in the future to manage Acton's wastewater. I have read the report, attended the public meetings, met with

members of the Acton Health Department and of the Citizens Advisory Committee (CAC), and I conclude that the report's recommendations are not supported by the data and the methodology, that the analysis failed to consider and evaluate alternative solutions to perceived problems, and that the criteria used by the CAC in deciding on their recommendations were arbitrary rather than "scientific".

Please consider the following :

1. The basic data from the Acton Board of Health which was used to identify wastewater disposal "problem areas" is extensive and detailed but not necessarily relevant. Acton has a very complex geology which does not permit extrapolation of septic disposal conditions from one parcel to the next. The data from the Board of Health is also (unintentionally) biased toward "problem" cases which required BoH intervention, it is not a statistically valid sample.

2. The report does not explain how the data was evaluated to generate the color-coded parcel classifications. Doug Halley told me that some third-party subcontractor using proprietary software did this. It is therefore impossible to independently evaluate the methodology, but my observation is that the "coding" of many parcels is inconsistent with reality. I am familiar with many parcels in my neighborhood that are classified in the report as not suitable for on-site septic systems for wastewater disposal but which recently had such systems (new and repairs) installed -- presumably with the blessing of the Acton Health Department.

3. The report fails to propose and analyze alternative solutions, as required. There is very little information about potential costs, and the financial data that is in the report is nothing more than "educated guesses" unsupported by any detail.

4. During the more than five year's of the report's preparation, public participation in the process was insufficient – it was essentially nonexistent until just before Acton's annual town meeting last April. There was (and still is) considerable confusion about the report's purpose, significance, and future applicability. Public officials' comments ranged from "it is just a plan, do not worry about it" to "we cannot proceed with any expansion of the existing sewer district before this report is approved". MEPA's role was not clear until just a few weeks ago. The timing of the report's submittal was also very detrimental to public participation – this time of the year, many people are away.

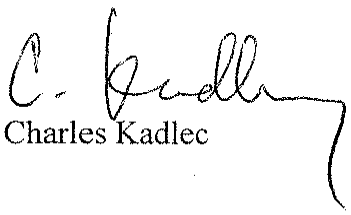
5. Except for some minor corrections of obvious errors, the report as submitted to MEPA was not changed to reflect any of the citizens' concerns that surfaced during the public meetings earlier this year, during the discussion at the April town meeting, and since.

6. The report's over-all conclusion, which essentially designates almost half the parcels in Acton as needing something more than on-site, Title V septic systems implies that the status quo is a significant risk to Acton's water supply. This is not supported by DEP's own reports – specifically the latest (10-17-02) SWAP report which lists residential septic systems in Acton as only a ***potential, medium*** risk to our wellfields.

I know that it is not your role to re-examine the data, to re-do the analysis and to attempt to formulate better recommendations. I ask that you challenge those responsible to do it, to recognize the subjective nature of much of this work, to qualify even the least controversial recommendations as "possible", "probable", "likely" or similar terms that recognize the underlying uncertainties. I would also like to see this report include the requisite financial analysis for all available options, at least for those areas that are considered "high priority".

Thank your for your consideration of my comments.

Very truly yours,



Charles Kadlec

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Secretary Stephen R. Pritchard
EOEA, Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston MA 02114

Re: Draft Acton Comprehensive Water Resources Management Plan (CWRMP)
Dated June 2006
Reference number: EOEA 13828

August 14, 2006

Dear Secretary Pritchard and Ms. Canaday,

I am writing as an Acton resident to comment on Acton's ENF and draft Comprehensive Water Resources Management Plan (CWRMP) that is currently under review through the MEPA process.

I agree with and echo all of the comments submitted by ACES (Acton Citizens for Environmental Safety), and I appreciate the opportunity to offer additional, more detailed comments on Acton's draft CWRMP report, as an individual. I also appreciate all the time and effort that went into creating the CWRMP.

Major comments:

A. Protect Zone IIs of public wells. Public drinking water is our primary exposure pathway to groundwater

1. In the Acton CWRMP, please provide for an action plan to specifically protect the Zone IIs of Acton's public water supply wells from wastewater contaminants, including "emerging contaminants". Since 95% of the Town receives its drinking water from these public wells, this is our primary exposure to the groundwater and therefore specifically protecting the Zone II areas should be a top priority of the CWRMP.

   Within the CWRMP, please provide a plan to specifically **minimize or mitigate existing wastewater disposal in or near Zone IIs,** by any type of wastewater system, and also **prevent new disposal in the Zone II's.**

   Please consider:

   a. When wastewater disposal is widely distributed throughout Town, and is located well outside of Zone IIs, the factors of dilution, time, and distance to the wellhead help protect our drinking water quality. This pattern of disposal also provides the benefit of automatically providing widespread recharge to our local streams and aquifers.

   b. Current wastewater treatment systems, both onsite and offsite, primarily provide treatment for bacteria and nutrients. But there are other substances in wastewater that are not treated and still pose a potential health risk to both humans and the environment. These include contaminants referred to as "emerging contaminants".

c. "Emerging contaminants" include, but are not limited to: viruses, household cleaning chemicals, medicines and pharmaceutical products, personal care products, and hormonal and endocrine disrupting chemicals. (See ACES comments.) These chemicals have the potential to cause serious health effects. More information is needed about their toxicity, persistence, concentration, breakdown products, synergistic effects, etc. There is a lack of both standardized sampling protocols for these contaminants, and also of effective treatment to remove these contaminants from water. Since the science of "emerging contaminants" is in its infancy, these contaminants are not yet regulated. Therefore neither wastewater treatment plants, nor water suppliers sample for them or treat the water to remove them.

2. The final recommendations of the June 2006 CWRMP include a majority of onsite "solutions" to Acton's wastewater issues. These onsite systems should benefit Acton's water resources by providing additional protection for both local water quality and water quantity (recharge to local surface water and groundwater aquifers). But even with onsite systems, a special focus should be placed on minimizing or mitigating wastewater disposal in or near the Zone II areas.

3. In some cases the Project Team and Citizens Advisory Committee (CAC) seem to have come to the recommendation for an onsite solution with reluctance, and only because of a limitation on available sewage disposal capacity. The current CWRMP prioritizes "wastewater solutions" that "optimize" the use of the Middle Fort Pond Brook Sewer System,

   "which may mean connecting as many properties as possible to fully use the pipes, pump stations and treatment facility...[to]...achieve an economy of scale." (p. 2-8)

   The approach of "optimization"---connecting as many properties as possible to sewers---conflicts with the fact that there is limited disposal capacity for sewering. In addition to the lack of disposal capacity, negative aspects of sewering in Acton include the loss of recharge to local streams and aquifers, and the threat that Indirect Potable Reuse (IPR) may pose to human health if it is used to mitigate the loss of local recharge.

   Some of the "Needs Areas" properties are labeled as such because they happen to be in a given neighborhood and not because they have been found themselves to have a "need". (See p. 1-7). One way to balance the many concerns is to ensure that properties with the highest level of environmental or public health "need" are given priority over properties that are included in a "Needs Area" for other considerations, such as the desire to provide the same "solution" to an entire neighborhood.

4. Please provide a color-coded parcel map of Acton that shows all Zone IIs in town and the following:
   - developed parcels that are currently discharging wastewater into Zone IIs
   - undeveloped parcels that will likely remain undeveloped (Conservation land, AWD land, cemetery, other designated open space, etc.)
   - undeveloped parcels that could be developed in the future and discharge wastewater into Zone IIs

   How many lots are in each category? If data are available, please provide the same statistics for parcels within a two-year travel time to the Zone IIs; and please mark the two year travel-time boundary on the map.

5. Please provide the following information in a table format:
   a. Number, location, and size of all lots currently disposing of wastewater into drinking water Zone IIs * (*A summary of information for septic systems > 2000gpd is in Table 3-12 of the June 2004 Phase 1 Report)

   b. Amount of wastewater (gpd), currently being disposed in Zone IIs

   For each of the above please provide data:
   - Townwide (Total)

- By wellfield (for the Acton Water District wells)
- By parcel
- By "Needs Area"

6. Will the proposed CWRMP (Sewers at Area 10 and Area 12-A) result in any decrease to the amount of wastewater disposal to Zone IIs? Which properties (if any) will no longer be discharging into Zone IIs? By how many gallons per day will discharge into Zone IIs decrease?

7. How many parcels in Area 12-B (West Acton Center-B) and Area 13 (Indian Village) currently discharge into a Zone II? If these two areas were sewered and IPR were used to discharge the treated wastewater into the Zone II at the Assabet wellfield, what would be the increase in numbers of lots and gallons per day discharging to Zone IIs, given no additional development within these two areas? If both Area 12-B and Area 13 (Indian Village) were sewered, fully built out, and the sewage effluent were discharged to a Zone II, what would these statistics be?

8. What provisions are currently in place, or can be put in place, to prevent additional future wastewater discharges to the Zone IIs of Acton's public wells, or other drinking water wells in Acton?

   For sewered projects, state regulations require a minimum of a two year travel time from a wastewater disposal site to the municipal wells. What regulations, either state or local, are applicable for smaller systems---ie septic systems? Cluster systems with communal leaching fields? Small package plants, etc?

   If a new "40B---affordable housing" project is proposed, would it be allowed to dispose of wastewater in or near a Zone II? (How close to the Zone II in North Acton is the wastewater disposal for the proposed 300+ unit 40B development called the "Woodlands at Laurel Hills"?)

9. Please review the existing needs parcels and "Needs Areas" in light of the detailed information requested above. If there is available sewer capacity, (without using IPR), please extend the sewer to reach a parcel that is discharging to a Zone II, rather than to one that happens to be in a certain neighborhood, but has a lower environmental or health impact. Given that hookup must be offered to each parcel that a sewer passes by this may result in a gerrymandered look to the sewer design, but it should hopefully be maximally protective of public health and the environment.

10. Please include specific actions in the CWRMP that will lessen the amount of sewage or septage currently reaching Acton's Zone IIs of our public water supply wells. This could include a proactive, high profile public education campaign on wastewater system preventative care. Please see comments below, especially comment #13.

11. To State Officials: For any sewage treatment plant wastewater disposal near a municipal wellfield, please consider instituting strict testing and treatment requirements, especially for "emerging contaminants", even if the discharge location is just outside the area that would be considered IPR.

12. For areas that may be sewered in the future, using IPR at the Assabet wellfield (or other municipal water supply wellfields), will not solve the problem of lost recharge to the local environment, as it will not recharge the groundwater or surface water within these areas. Water will come into homes in these neighborhoods in a drinking water pipe and leave the homes in a sewer pipe. (Will contaminants become concentrated after several cycles of this loop?) The exception to the closed loop will be outdoor water use, including lawn sprinklers, etc, with accompanying water quality issues, such as the runoff of lawn chemicals.

    Recycling the treated wastewater through our bodies and our homes as drinking water is also not an appropriate or effective way to recharge local streams and aquifers in other parts of town that may not be sewered. Water quantity issues should be addressed in other ways.

B. Proactive Public Education needed

13. Public education should be a centerpiece of the CWRMP.

The CWRMP should provide more emphasis on public education as a means to protect our water resources.

Please develop a high profile proactive public relations campaign to actively and consistently provide ongoing information to the whole town on actions that individuals can take in their everyday lives to protect our water. (How many people are aware that they should not dispose of unused medicines by flushing them?) This should be something the town could implement almost immediately, and should not cost a lot of money, especially in comparison to the price of sewering or managing databases for Wastewater Management Districts. Raised awareness can lead to changed behavior. We have seen this happen in Acton with water conservation.

Public relations efforts should not just be waged to convince the public to spend millions of dollars to pay for a "wastewater solution". Public education should be aimed toward prevention. Information can be presented actively, repeatedly and frequently to remind people of everyday actions they can take right now to lessen the probability of developing a "wastewater problem" in the first place. This can be done townwide, without waiting for the implementation of "wastewater management districts" and parcel-specific data. Some residents may be more receptive to information and making changes if they do not feel that they or their neighborhood are being singled out for a large, costly "solution." Small changes in behavior by many people can add up to a big difference.

Suggestions:

a. **Use available literature to be cost efficient**: Make use of existing literature from federal, state, or local sources. Use it as is, or make appropriate changes to adapt it to Acton. Many communities deal with these issues, and so we do not need to spend a lot of money starting from scratch.
b. **Use volunteer help** (Senior tax relief program, student interns, etc.)
c. **Take advantage of existing town mailings**. These include tax bills, the Municipal Quarterly, HazMat Day notification, Recreation mailings, etc. Include reminders with these mailings---(Have you pumped your septic system yet this year? etc.)
d. **Provide information to local newspapers**. Through a recurring guest column, as well as news articles, the Town could provide ongoing information to encourage preventative care for wastewater disposal, etc.
e. **Model other successful public information campaigns**; e.g. The Acton Water District's highly successful public relations efforts to promote water conservation could be modeled. The campaign to change your smoke detector battery when you turn your clocks back, could be morphed into "schedule your septic system pumping when you pay your tax bill"…
f. **Create a bullet point list of Dos and Don'ts** on bookmarks etc. and distribute them at public venues, (Oktoberfest, Acton Day, elementary schools, the library, etc.)
g. **Create moveable sandwich-board signs** with information and rotate them around town. (The Water District has effectively done this to remind people about restrictions on outdoor water use.)
h. **Target critical populations**---Provide information on proper medication disposal at the Senior Center; in medical doctor's waiting rooms etc.
i. **Provide extensive education to properties with wastewater disposal in or near the Zone IIs** of Acton's public wells.
j. **Encourage people to conserve water.** This is another way to protect our water resources. We do NOT need to implement IPR in order to promote water conservation.

C. Detailed Comments:

14. *Page ES-2 states: "The result is a holistic approach to management of drinking water, wastewater, stormwater, and surface and groundwater resources."*

The CWRMP is essentially a wastewater plan. Background information is provided on the other water resources in the 2004 Phase I report, but the management plan is for wastewater.

15. *p. ES-2 to ES-3 states: "Priority non-technical criteria include....water reuse (reclaimed water reuse) and recharge of groundwater/aquifers."*

a. It is sewering that triggers a need to provide extra recharge of groundwater, since sewers divert groundwater through pipes. The other wastewater "solutions" under consideration: septic systems, I/A technology, cluster systems with a common disposal field, package treatment plants, and wastewater management districts all provide for onsite disposal of wastewater and so water reuse or recharge of local groundwater automatically occurs, in a widely distributed pattern, primarily outside of Zone IIs. If IPR is used to mitigate the loss of recharge caused by sewers, this may increase potential health threats to our drinking water. Disposal of wastewater into a Zone II should be considered a negative factor not a positive one. (See comments above in Section A. Also see ACES comments.) Isn't grey water use in Acton prohibited by Acton Health Department regulations?

b. For rating potential wastewater "solutions", the CWRMP implies that the Citizens Advisory Committee (CAC) used 'reclaimed water reuse' as a positive criterion, which it applied only to offsite solutions that discharged wastewater into Zone II's. Offsite discharge into a Zone II was considered for Area 5 (Brucewood Estates) from a cluster system, and for Area 13 via an extension of the existing sewer system. (See Appendix H.) But,

- Onsite solutions automatically provide recharge to Acton's local streams and aquifers.
- Disposal of wastewater in our Zone IIs, (especially in large volumes), could pose potential health risks to Acton residents, via public drinking water.
- Acton's drinking water demand is well below its permitted withdrawl capacity (See comments #36 and #37 below; and also comment #12 above).
- No surface water discharges of wastewater are proposed in Acton. (IPR may sometimes be proposed as an alternative to a surface water discharge.)

16. *p. ES-4 Potential Solutions*

Please incorporate a strong public education effort on proper care and maintenance of wastewater systems as a feature of all solutions, including continual reliance on existing systems. Please repeatedly present the public with practical steps individuals can take right now to prevent or minimize problems in the future, and to lower their contributions of "emerging contaminants" to the waste stream. (See comment # 13, above.)

17. *p. ES-4 Structural Systems, "High Street"*

"High Street" or the "High Street Parcel" was formerly referred to as the "**Assabet Wells Area**". (*Appendix E, December 17, 2004 letter from Robert Rafferty at Woodard &Curran to Mr. Steve Hallem at DEP, Re: Town of Acton Wastewater Effluent Disposal Sites*). The proposed discharge location that was investigated is located between the two public water supply wells, known as Assabet I and Assabet II and was about 1000 feet away from the wells. *(Appendix E, Preliminary Hydrogeological Site Evaluation, January 26, 2006, p. 2-4)*. The scenario is to discharge treated wastewater into the Zone II of the public wells. Renaming the site the "High Street parcel" raises a red flag, because it seems intentionally cryptic. Please use the more accurate, original name for the site: the "Assabet Wells Area".

18. *p. ES-4 Structural Systems, "The potential disposal areas have drawbacks that limit the Town's options."*

a. "High Street", (the Assabet Wells Area) does not just have "drawbacks" as a disposal location; current state regulations prohibit disposal there. The travel time from discharge point to the municipal wells is less than two years, and may even be less than one year. (p. 2-24). State regulations require a minimum travel time of two years.

Thank you for noting in the Executive Summary that "each Area associated with the four dispersal locations has other viable solutions..."

b. To state officials:
Please DO NOT weaken State regulations that are in place to protect public drinking water supplies. Please DO NOT decrease the minimum travel time from two years to one year. If anything, given the unanswered concerns and potential health threats posed by "emerging contaminants", please consider strengthening the regulations. Please consider that standardized sampling protocols and effective treatment protocols are not available for these contaminants that may be hazardous even in very small quantities. Since the science of "emerging contaminants" is still in its infancy, these contaminants are not yet regulated and neither wastewater treatment plants nor public water suppliers either test for these contaminants nor provide treatment to remove them from the water.

19. *Top of page ES-5 Indirect Potable Reuse Working Group*

I attended three of the four Indirect Potable Reuse (IPR) Working Group public meetings, as an audience member. IPR is presented in the June 2006 CWRMP Draft as if the IPR Working Group recommended that IPR be actively pursued. Actually, the group repeatedly expressed serious concerns about potential health effects from "emerging contaminants", but given the 20 year time frame, they were unwilling to reject the idea completely. They took a wait and see attitude. The following text from p. 1-6 of the February 2006 version of the CWRMP more accurately reflects the attitude of the group at the meetings, than the description in the June 30, 2006 draft of the CWRMP:

"The group, and subsequently the CAC, recommended further study of the issue, but not abandonment of the idea, pending technological advances."
(See http://www.acton-ma.gov/departments/Health/default.asp?id=74&mypage=74&myName=Health

Click on <<CWRMP Phase II. Draft Report (10mb)>>; see page 1-6 of the Feb. 2006 Draft CWRMP.)

20. *Top of pageES-5 Indirect Potable Reuse Working Group*

The point was made repeatedly at the IPR Working Group Meetings that the Assabet Wellfield is highly productive and not itself in need of additional recharge. According to the Acton Water District Manager this wellfield could supply 75% of the Town's water demand and still have a surplus to sustain the surrounding ecosystem. (*AWD Water Words Notice, Winter 2006.*)

The reason IPR is being considered at the Assabet wellfield is because of a lack of disposal capacity from the Adams Street wastewater treatment facility, if additional areas in Acton are sewered in the future. IPR is being considered as a method to mitigate the loss of recharge to the town if sewers are used. If other onsite forms of waste disposal are used instead of sewers then the hydrologic cycle is automatically preserved and there is no need to take extra steps to keep water local.

21. *Page ES-7, Top of page states: "Regardless of the private systems' status, cluster/neighborhood systems should be utilized where capacity is available in the High Priority Area 3 (East Acton Village)."*

What does this mean? Is there an issue with the status of the private package plant? Is this the facility at the former "Suburban Manor"? Please provide more information. Or does the statement refer to private septic system owners in the area who may be required to join a cluster system?

22. *p. 1-3 to 1-5 Focus on Water Resources*
a. Thank you to the Town and the Acton Water District for the many steps they have taken to protect and manage water resources. Congratulations and thank you especially to the Acton Water District for its very successful public education efforts that have resulted in an increase in water conservation, and to the Town, especially the Health Department for its long term surface water monitoring for coliform bacteria.

b. Have corrective or enforcement actions been taken by the Town based on the results of the bacteria monitoring program? Has the Town seen a "continual decline in surface water quality" in areas of Town with significant growth (p. 1-4)? Specifics?

23. *p. 1-3 to 1-6, BOH Groundwater Monitoring Program and BOH Surface Water Monitoring Program, See also Phase I CWRMP report, June 2004;pp. 2-28 to 2-29*

a. Groundwater

Nitrate data:

A summary of monthly nitrate data from 1995 onward is found in Table 2-15 of the 2004 Phase I CWRMP report (p. 2-29). Of the 11 sites sampled monthly, all met drinking water standards for nitrates except one well that had five samples that exceeded the drinking water standard in 1996-1997; and a second well that had three samples exceed the standard during that same time period, about 10 years ago. The first well (on Kelly Dr.) is in an area that is now on sewers. The second well is on Birch Ridge Rd. in West Acton. The footnotes for both of these two wells state: "Levels exceeding 10ppm have not been recorded since."

After the Phase I Report was submitted, the Birch Ridge Rd. well had three other detections of nitrates above 10ppm in 2004, and the level was 4ppm on 8/29/05 (Information from CAC member, Jane Ceraso). The West Acton Area is designated for sewering in the 2006 CWRMP.

How far is the Birch Ridge Rd. monitoring well from the AWD Clapp-Whitcomb public wellfield? How much of a threat is posed to the public well? Is there a plan in place to find the source of the high nitrates and to take appropriate action ASAP? (e.g. replace a failing septic system if that is the problem? Could beaver activity in the area also be a contributing factor?)

b. Surface Water

Coliform bacteria data:

The Acton Health Dept. has 25 years worth of coliform bacterial data from 30 to 47 sites. There do not appear to be any data summary tables or figures of these data in the CWRMP reports. Page 2-29 of the Phase I report states: "Although many sampling points still exceed the Massachusetts Class B inland water threshold at least once a year, current data do not show conclusive negative impacts that can be attributed to specific failing septic systems."

24. *p. 1-6 to 1-7 Johns Hopkins University Center for Water and Health, nationwide survey of pharmaceuticals and personal care products (PPCPs) in wastewater*

Thank you to the Town for taking the initiative to join this study. It is my understanding that one sample of effluent from the Adams Street Wastewater Treatment Plant was sent to Johns Hopkins during the summer of 2005, but as of July 2006 it had not yet been analyzed.

How is the Acton sample being stored? Is there any chance that either the storage method, or the passage of time will affect the viability of the sample or accuracy of the results? Please make the public aware of the results when they are received.

Pharmaceuticals and personal care products were among the "emerging contaminants" that the IPR Working Group and others were concerned about. Other "emerging contaminants" of concern included viruses, household cleaning products, and hormonal and endocrine disruptors. (There may be some overlap between the various categories of contaminants.)

25. *p. 1-10 Figure 1-3, Areas of Interest, Public Water Supply*

a. Figure 1-3 shows the Zone II areas in Town. The legend identifies a well symbol as "Public Water Supply (Zone II)". An incredibly tiny label identifies one of these well symbols in the southeastern part of town as Assabet No. 3. There is no such currently operating public water supply well. The Acton

Water District is currently seeking to gain a permit for a new municipal well near the site of the former industrial supply well known as WRG-3.

b. There are many unanswered questions and concerns about potential contaminants in the area of WRG-3. Potential sources of contamination in the area include heavy metals and pesticides from the Agway Kress 21E Site, volatile organic compounds (VOCs), arsenic, and other inorganics from the WR Grace Superfund Site, uranium, beryllium and VOCs from the Nuclear Metals/Starmet Superfund Site, and VOCs and MTBE from the area of the former Haney building on Route 62.

c. If a new public well were opened at the Assabet wellfield, how would this affect the travel time to any of the municipal wells from the disposal site at the Adams Street Wastewater Treatment Plant? Would the Assabet wellfield be within a 2 year travel time of the sewage disposal site, if a new public well were brought online? (The Acton Water District has predicted that given three municipal wells at the Assabet wellfield, the Water District "would be able to produce almost all of its registered withdrawl volume from these three wells combined." *(Undated letter from Acton Water District to WR Grace Co., received by WR Grace, August 18, 2005)*) Likewise, if there were additional disposal—greater than 299,000 gallons per day---at the Adams Street facility how would this affect the travel time with or without the addition of a new public well at the Assabet wellfield?

26. *p. 2-1, Typo on bottom of page, 2990,000 gpd*
The facility has been expanded to 299,000gpd.

27. *p. 2-4, last paragraph*
The text states: *"In town locations for disposal facilities were identified...by searching for publicly owned property and large tracts of private land with favorable soils located outside of sensitive resource areas."*

And yet one of the locations chosen as a potential disposal site was the Assabet public water supply wellfield. Maybe the term "sensitive resource area" refers to surface water features such as vernal pools, etc., but shouldn't the Assabet wellfield also qualify as a , "sensitive resource area", since it supplies a substantial portion of Acton's public drinking water?

28. *p. 2-8 "Increased infiltration and runoff control is being addressed through development of Acton's post construction runoff control bylaw."*

What is the status of this bylaw? Is it a current Acton bylaw, and if so where can it be found? If not, when will it be developed? Please provide details on its content.

29. *Pages 2-9 to 2-13, including Table 2-4 on pp. 2-11 to 2-13*

Area 7 (Powdermill Plaza), and Area 14 (Flagg Hill) are the only two "Needs Areas" cited as potentially affecting Zone IIs. Powdermill Plaza is "partially in a Zone II" and is being added to the existing sewer system. Table 2-4 states that Flagg Hill abuts a Zone II. A wastewater management district is planned to address the wastewater needs for this area.

Do other "Needs Areas" have potential for affecting Zone IIs? Please see previous comments under section A of this comment letter.

30. *Page 2-21, Section 2.6.1 Preliminary Hydrogeologic Study – Potential Disposal Locations.* The text states: *"Appendix E contains the report, including DEP comments, in its entirety."*

The pdf version of Appendix E., as it is posted on the Town of Acton website, does not appear to contain DEP comments. Are they available elsewhere?

31. *Page 2-22 states that the criteria for selecting parcels for disposal of wastewater "also included other considerations such as locations that were not likely to affect sensitive environmental and human*

receptors, or those that were too close to the wellhead protection area surrounding a municipal well." (Also see Appendix E.)

And yet one of the areas chosen as a potential disposal site was the Assabet public water supply wellfield. The potential sewage effluent discharge location was between two municipal wells, and approximately 1000 feet from the wells. (1000 feet away from the wells was not considered too close?!) Travel time to the wells is less than two years and may even be less than one year (p. 2-24). Thus wastewater disposal here would not be legal under current state regulations.

Our public drinking water wells and their Zone IIs should be considered among the most sensitive areas in Town as far as public health is concerned. As such, wastewater, even treated wastewater, should be kept as far away from the wells as possible, not piped across town and delivered in large quantities to the doorstep of the wells. The municipal wells are our primary exposure to groundwater and any contamination within groundwater. Due to the Acton Water District's widespread distribution system they have the potential to expose a large percentage of Acton's residents to contamination, should any enter the water supply.

As previously stated, wastewater is not tested by treatment plants for the presence of medicines and pharmaceutical products, household cleaners, personal care products, or hormonal and endocrine disrupting chemicals. Water suppliers also do not test for these substances in drinking water. Neither wastewater treatment systems nor water suppliers provide treatment to remove these contaminants from the water.

Let's not institute a wastewater "solution" that may pose more of a threat to public health than the "need" it seeks to address.

32. *p. 2-22, Field Work and Data Analysis, "High Street"*

Again please refer to the third site that was investigated for wastewater disposal as the "Assabet Wells Area"; not "High Street". (See previous comment, #17.)

33. *p. 2-23, Figure 2-5 Disposal Sites for High Priority Planning Areas*

Figure 2-5 shows the Assabet public water supply wellfield as the disposal site for Area 13 (Indian Village). But Indian Village has a viable alternative to sewering. The CWRMP recommends a Wastewater Management District to meet Indian Village's wastewater needs. "..the primary technical needs criteria are high groundwater and poor soils, which can be overcome by acceptable advanced technologies. Increased monitoring through a wastewater management district would protect the area from risks to the environment and public health." (p. 2-35)

34. *pp. 2-24 to 2-26 Reclaimed Water Reuse*

Town Staff has been very enthusiastic and very open about the subject of Indirect Potable Reuse, and especially helpful with providing literature about current studies and concerns on the subject. I especially appreciate this openness and the exchange of information.

However, the tone of the Reclaimed Water Reuse section of the CWRMP implies that the Acton IPR Working Group recommended active pursuit of Indirect Potable Reuse (IPR), when in fact the attitude of the group was to take a 'wait and see' approach. As a group, they were reluctant to rule out any option, including IPR, given the 20 year time span of the CWRMP.

As mentioned earlier, I attended three of the four meetings of the IPR group as an audience member. (I missed the August tour.) The group met twice in June, cancelled the July meeting, took a tour of the Adams Street Wastewater Treatment Facility in August, and met one more time in October to provide feedback on the Final Report that had been written by Town Staff.

35. *pp. 2-24 to 2-26 Reclaimed Water Reuse, "Coupling implementation with increased water conservation and emerging contaminant source reduction efforts."*

The Town of Acton should make every effort to raise awareness of the need for water conservation, and the need to reduce or eliminate the presence of chemical contaminants in the waste stream right now. Pursuing IPR should not be a prerequisite to providing this valuable education. Water conservation is an ongoing need and the Town should join the Acton Water District in its successful public education efforts, and/or initiate their own complementary program. Since wastewater is apparently being discharged into or close to Zone IIs under current conditions, there is an immediate need to educate the public to reduce all potential contaminants in wastewater including: household chemicals, medicines and other pharmaceutical products, personal care products, and hormonal and endocrine disrupting chemicals.

36. *p. 2-25* The text states: *"...in the 2004 Water Assets Study, EOEA recently projected a buildout water demand of 2.13 MGD, which is above the AWD's Water Management Act regulated annual withdrawl volume of 1.93 MGD"*

Please note that the June 2004 Phase I CWRMP overestimates future water demand in Acton. Table 3-10 in that report, "Water Demand Projections (Water Master Plan Update 2002)", predicts future water use based on a numerical model. Water demand for 2005 was predicted to be 2.07 MGD. Actual water use for 2005 was 1.7 MGD.

A contributing factor to the overestimation by the model may have been that in 2001 a water valve was left open to Maynard resulting in an average daily use of 2.20 MGD for that year. (*Phase I CWRMP, June 2004, p. ES-2*) This number is anomalously high. The text of the 2004 CWRMP report states: "With the exception of 2001, the District's average daily use has remained at approximately 1.85 MGD since 1997 even though Acton's population has grown by about 10 percent during that period." (*Phase I CWRMP, June 2004, p. ES-2*). Since 2004, water use has been even lower than the average daily water demand from 1997 to 2002.

Thank you and congratulations to the Acton Water District, (AWD), for their very successful water conservation program, and to all the residents of Acton who have responded so positively and have taken steps to lower their water consumption in Acton.

37. *p. 2-25* The text states: *"...in the 2004 Water Assets Study, EOEA recently projected a buildout water demand of 2.13 MGD, which is above the AWD's Water Management Act regulated annual withdrawl volume of 1.93 MGD.....As a potential mitigation of this shortfall, the Project Team's Preliminary Hydrogeological Study investigated the High Street well fields (Assabet #1 and Assabet #2 wells) for a potential reclaimed water dispersal site.*

How was the buildout water demand calculated? Was it influenced by the anomalously high average daily demand in 2001 due to an open valve allowing Acton water to flow into Maynard? (See discussion in previous comment.) Is it possible that our actual buildout demand may be lower than predicted, especially given that Acton has been so successful at promoting water conservation, and has consistently used less water than predicted? (Aren't water suppliers in general always asking regulators to increase their permitted average daily withdrawl limit?) As already stated in the previous comment, Acton was predicted to use 2.07 MGD of water in 2005, but actual demand was only 1.7 MGD.

Will the perceived "shortfall", between future demand and the AWD's permited withdrawl limit, turn out to be an actual shortfall? Please do NOT try to mitigate a "shortfall" that may not come to pass, by allowing the disposal of wastewater into our drinking water supply wellfields, and perhaps exposing large portions of the population in Acton to contaminants they might not otherwise be exposed to.

Another way to keep water local and provide recharge for our streams and aquifers is to use onsite wastewater disposal systems. There must be additional strategies, (water conservation, pervious paving,

low impact development, more preservation of open space, etc.), that the Town could use to address the water quantity issue that do not involve recycling the water through our bodies and homes.

38. p. 2-26 *The text states: "But until regulations reduce the limits on travel time, the potential disposal site is infeasible"*

Please do NOT interpret this as a request to weaken the regulations that protect our drinking water. Please do **not** decrease the travel time from two years to one year, especially given all the unknowns about emerging contaminants. What is their persistence; how far and how quickly can they move through the ground? How toxic are they, and at what concentrations? What is their effect when present with other contaminants? What do they breakdown into, and how toxic, etc. are these daughter products? What are their health effects on humans given long term exposure, especially in water that we drink and bathe in everyday?

39. *Appendix F Final Report of the Acton Indirect Potable Reuse Working Group*

Inserting a recommendation about a pilot study into the Final Report of the IPR Working Group was brought up as a suggestion toward the end of the October 25, 2006 meeting of the IPR Working Group, by a member of the Group, who is also a longtime proponent of sewers in Acton. Other members of the working group were not comfortable with this being inserted into the report at the last minute, without further discussion, but the meeting was cut short, due to a Health Department emergency. The working group did not meet again and the report was subsequently revised by Town Staff to include the mention of a pilot study and was presented to the CAC for its approval in November 2006.

40. *p. 3-24 Short-Term Recommendations*

The CWRMP lists a "pilot study" as a short term recommendation.

a. If the Town invested money in a pilot study and whatever technology, expertise and expense that involved, would pressure then be applied to the oversight committee and/or public to "optimize" that investment? (The concept of "optimization" has already been used as a driving force to encourage further sewering in Acton, under this CWRMP.)

b. It is unlikely that scientific information will be available in the short term on the long term effects of daily exposure to "emerging contaminants" in drinking water. One cannot undo previous exposure if future information demonstrates risk. Already at the Assabet wells, due to our lack of information at the time, and lack of testing protocols, adequate regulations and treatment, Acton residents were exposed to volatile organic compounds (VOCs) for an unknown period of time. We now know that some of the VOCs from the WR Grace Superfund Site---benzene and vinyl chloride are human carcinogens.

Information is always evolving. Vioxx and hormone replacement therapy are now considered to pose risk, while previously they were widely prescribed. The IPR Working Group learned that some treatments for "emerging contaminants" actually increase the risk from one contaminant, while trying to reduce the concentration of another.

The best way we can protect ourselves is to minimize the chance that there is anything besides water in our drinking water. Let's keep wastewater and other sources of contamination as far away from our wellfields as possible. Meeting current drinking water regulations does not mean that the water does not contain "emerging contaminants", which may pose health risks. Current regulations do not currently require the water to be tested for these contaminants, but what we don't know can still hurt us.

c. The Assabet wells already face water quality challenges. This is an especially important consideration, given that the Acton Water District has indicated its interest in supplying an even greater proportion of its public water supply from the Assabet wells in the future.

The Assabet wellfield has more sites presenting risk to its Zone II than any other Acton wellfield (*Phase I CWRMP Report, June 2004, Table 3-12 "Threats to Groundwater Contamination in Acton's Zone II's", p. 3-23*). The Assabet wellfield has 42 sites posing risk, while the maximum at any of the other wellfields is 15. Also the number of storage tanks posing risk to the Assabet wellfield (51) is more than those at all the other wellfields combined (26). In addition to volatile organic compounds, arsenic and other inorganic compounds from the WR Grace Superfund Site, other potential contaminants near the Assabet wellfields include heavy metals and pesticides from the Agway Kress 21E Site, uranium, beryllium and VOCs from the Nuclear Metals/Starmet Superfund Site, and VOCs and MTBE from the area of the former Haney building on Route 62.

Let's not add to the water quality burden at the Assabet wellfield. Given all these concerns, please do not include a pilot study as a "short term" recommendation in the CWRMP. Let's watch the literature and learn what we can from studies in other parts of the country.

41. *Long-Term Recommendations*

Thank you for making the long-term recommendation that the "solution" for the wastewater "needs" in Area 13 (Indian Village), should be a Wastewater Management District, rather than a sewer extension.

42. *Appendix F. October 25, 2005 Meeting Minutes* of *the Acton Indirect Potable Reuse Working Group*

October 25, 2005 was the last meeting of the IPR Working Group and so minutes were not reviewed or approved by the group. The text states: "MM wanted the report to stress the importance of IPR as a method of wastewater disposal".

The request I made at the meeting, and that I have made repeatedly at public meetings, and in these comments, is that it be made clear in the Final Report, the CWRMP and elsewhere that:

> the driving force behind the Town of Acton considering IPR is a lack of disposal capacity for sewers, and NOT a need for recharge at the highly productive Assabet wellfield.

Please change both the Final Report and the CWRMP to make this point clear. Likewise, please also amend the October 25, 2006 meeting minutes.

Recycling the treated wastewater through our bodies and our homes as drinking water is not an appropriate or effective way to recharge local streams and aquifers that lose recharge as a result of sewering. (See previous comment #12.)

Thank you again for the opportunity to comment on Acton's June 2006 Draft Comprehensive Water Resources Management Plan.

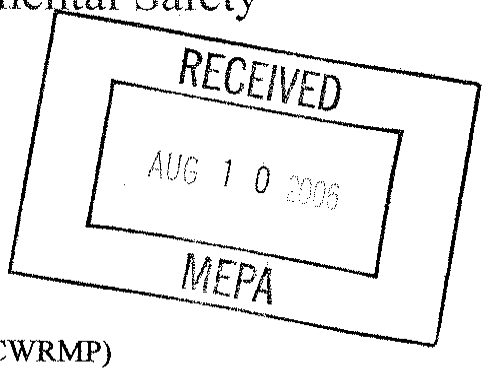
Sincerely,

Mary Michelman
msmichelman@comcast.net

cc: Acton Board of Selectmen
Glenn Hass, DEP Acting Assistant Commissioner, Bureau of Resource Protection
Paul Anderson, DEP Drinking Water Program, Central Region

AC

ACES Acton Citizens for Environmental Safety



Secretary Stephen R. Pritchard
EOEA, Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston MA 02114

Re: Draft Acton Comprehensive Water Resources Management Plan (CWRMP)
Dated June 2006
Reference number: EOEA 13828
ACES Comments

August 9, 2006

Dear Secretary Pritchard,

The following are ACES' comments on Acton's June 2006 Draft CWRMP Report that is currently undergoing review as part of the MEPA process. Thank you for the opportunity to provide these comments and also thank you to Ms. Anne Canaday for coming to Acton on Wednesday August 3, 2006, for a MEPA site visit.

Acton Citizens for Environmental Safety (ACES) appreciates the opportunity to comment on Acton's Comprehensive Water Resources Management Plan (CWRMP). ACES appreciates all the hard work that went into creating the CWRMP, and compliments the project team and the CAC for in many cases recommending local solutions, such as Wastewater Management Districts and cluster/small package plants to address Acton's wastewater needs, and to protect our groundwater. These approaches keep local water local and therefore provide recharge to our local streams and aquifers.

ACES has serious concerns about the limited disposal capacity of the Adams Street Wastewater Treatment Facility and the possibility that Acton might in the future consider disposing of treated wastewater into our local public drinking water supply aquifer near the Assabet wells, ie implementing Indirect Potable Reuse (IPR).

ACES urges the Town to limit its efforts regarding IPR to monitoring the literature and any relevant developments in other parts of the country.

ACES respectfully requests that the CWRMP report be amended to reflect the following comments:

1. Appendix E of the CWRMP includes the Final Report of the Acton Indirect Potable Reuse Working Group. ACES is happy to have had a representative on the IPR Working Group, but would like to make it very clear that **ACES is opposed to the active pursuit of Indirect Potable Reuse (IPR) in Acton.**

2. Of the four recommendations included in the Final Report of the Acton IPR Working Group, the only one that ACES supports is #2 "Continue to monitor academic and regulatory developments with Indirect Potable Reuse and their possible impact on Acton."

3. ACES strongly requests that the Massachusetts Department of Environmental Protection **NOT weaken the regulations on IPR**, and that they retain the requirement for a minimum of a 2 year travel time from a treated wastewater disposal site to any groundwater supply wells. (See ACES concerns expressed in comments 4f and 4g below. ACES also plans to send a letter to DEP about this issue.)

4. Figure 2-5 on page 2-23 of the CWRMP main report is entitled "Disposal Sites for High Priority Needs Planning Areas". This figure shows the Assabet Public Water Supply Wellfield as the disposal site for Area 13 ("Indian Village").

ACES opposes disposal of treated wastewater into the Zone II of the Assabet wellfield, (or anywhere in the area with less than a 2 year travel time to the Assabet wells). ACES also opposes the performance of a small-scale local pilot test that may lead to IPR at the Assabet wellfield.

Considerations include:

a. The potential disposal site at the Assabet Wellfield ("High Street parcel"), is less than a 2 year travel time from the wells and may even be less than a one-year travel time, according to the January 26, 2006 Hydrogeologic Report in Appendix E of the CWRMP. (See also p. 2-24 of the main report.)

b. The Assabet wells are highly productive, and not in need of supplemental recharge. The point that the Assabet aquifer is one of the deepest, most productive aquifers in town was made repeatedly by Town representatives at the public hearings on the WR Grace Superfund Site during the summer of 2005. Also according to Jim Deming, Acton Water District Manager, "the total amount of supply available here [the Assabet wellfield aquifer] would meet more than 75% of the current demand throughout the entire system [all of Acton], and there would still be a surplus of water available in the aquifer to sustain the surrounding ecosystems." (Acton Water District Water Words Notice, Winter 2006)

   The reason that IPR is being considered for the Assabet Wellfield, (cryptically referred to as the "High Street parcel"), is because of a lack of disposal capacity at the Adams Street Wastewater Treatment Facility; and not because of any existing need for recharge at the Assabet public wellfield aquifer. **The CWRMP report**, including the Executive Summary and the IPR Working Group Final Report **should be revised to make this point clear.**

c. Area 13, ("Indian Village") has a viable alternative to sewering. The CWRMP report recommends that the solution to the wastewater disposal needs in Indian Village is to create a Wastewater Management District, to protect human health and the environment. This solution also automatically keeps local water local, negating the need to mitigate loss of recharge to local streams and aquifers, (which is triggered by the use of sewers, but not by other wastewater disposal options).

d. Figure 2-4, entitled High Priority Needs Planning Area, shows that the majority of parcels in Area 13 (Indian Village), do not have a "need" for a solution (p. 2-16). Most

parcels do not require a mound with I/A, and very few require an "alternative solution". According to page 2-35 of the CWRMP, "the primary technical needs criteria are high groundwater and poor soils, which can be overcome by acceptable advanced technologies." The reason given by the CAC for preferring to sewer Area 13, is "concern regarding aesthetics", (mounded systems)—which the CWRMP acknowledges is "not as important as environmental and public health criteria."

e. We need to be certain that the "solution" of IPR is not more of a threat to public health than the "need" that it seeks to remedy. The level of human exposure to contaminants could potentially be much greater and much more widespread if they were introduced into our public water supply via IPR, than the exposure would be via onsite septic systems. It would be tragically ironic if the Town exposed its citizens to potentially hazardous materials via public drinking water, in order to address aesthetic concerns.

f. As stated in the CWRMP and the IPR Working Group Final Report, there are serious scientific and health concerns about "emerging contaminants" that are present in treated wastewater. "Emerging contaminants" include, but are not limited to: viruses, household cleaning chemicals, personal care products, pharmaceutical waste, and hormonal and endocrine disrupting chemicals. These contaminants, which are not included in current standard detection or treatment programs, and may be part of a complex chemical cocktail in wastewater, have the potential to cause serious health effects. For many of these contaminants there are currently no standardized protocols for either sampling for them or providing treatment to remove them from the water, either by wastewater treatment facilities, or by public water suppliers.

   For these reasons, and those stated in comment 4g below, ACES believes it is especially important that the "Precautionary Principle" be applied to any proposed reuse of treated wastewater.

   For each of the emerging contaminants, full knowledge is needed of their:
   - Persistence
   - Mobility
   - Concentration
   - Hazardous breakdown products
   - Synergistic effects
   - Sampling protocols
   - Treatment options
   - Potential health effects

g. The Assabet wells have already faced their share of water quality issues. They are part of the WR Grace Superfund Site in Acton and were shutdown for a time in the early 1980s due to contamination with volatile organic compounds (VOCs), from the WR Grace Site. Prior to the discovery of the contamination in the wells, residents of Acton were exposed to toxic chemicals, (including ethylbenzene, benzene, TCA, TCE, toluene, and chlorobenzene), in their drinking water for an unknown period of time. Scientific knowledge, waste disposal practices, testing and treatment protocols, public awareness, and drinking water regulations regarding these chemicals, were not advanced at that time and the result was that the public was unknowingly exposed to these toxic chemicals.

A similar situation exists now for "emerging contaminants" in wastewater. As stated in comment 4f above, for these contaminants there is a lack of scientific knowledge about their toxicity, persistence, breakdown products, mobility, synergistic effects when present with other contaminants, etc. There is a lack of both standardized sampling protocols for these contaminants, and also of effective treatment to remove these contaminants from water. Because the science of "emerging contaminants" is in its infancy, these contaminants are not yet regulated. But as with the VOCs in the Assabet wells in the late 1970's and early 1980's, what we don't know can still pose a threat to public health. Let's learn from Acton's history to "act on the side of safety", especially in regard to our public drinking water supply.

5. The CAC has stated that it shares ACES concerns about "emerging contaminants" (Appendix J). The Acton Board of Selectmen pledged at an April 3, 2006 meeting that the Town has no immediate plans to pursue funding for a pilot study for IPR and that the current Board of Selectmen would not do so in the future without first bringing the issue before a Town Meeting.

As stated in the CWRMP, "indirect potable reuse as an effluent strategy is uncommon in the northeast U.S." (p. 2-25) With the water quality issues already faced by the Town of Acton, let's not be among the first in the northeast to try out IPR.

ACES urges the Town to limit its efforts regarding IPR to monitoring the literature and any relevant developments in other parts of the country.

Thank you again for the opportunity to submit these public comments from ACES on Acton's June 2006 draft CWRMP Report.

Sincerely,

Mary S. Michelman

Mary S. Michelman,
ACES President
978-263-7370
msmichelman@comcast.net

cc: Acton Board of Selectmen

To: MEPA
From: Terra Friedrichs, resident of West Acton Village

Anne,

Thank you for taking the time to review our comments. I have organized the comments into two sections:
- Overall Comments
- Specific Comments, by page number

I hope this assists in your review.

Terra

Overall Comments

* Overall Comment 1: "THE" PLAN IS "A SOLUTION LOOKING FOR A PROBLEM"

This plan seems to be a solution looking for a problem. There are many references in the report which imply that sewering is THE solution; that there is only one solution for areas. In several of these areas, it is simply not that clear yet what the solution should be.

For example, there is only one design layout for the sewer extension to West Acton. One structural solution is presented with one set of financial figures. Cluster solutions are not examined. Furthermore, it's not even clear whether WAC will actually need off-site solution in the planning horizon. Yet, if you look at the report, there are many, many references to "the" solution. And many statements that appear to be justification for sewering...the "selling" of "the" solution.

There is no set of options with a sensitivity/cost analysis over time. There is no Scenario A versus Scenario B for a particular needs area. No real analysis of the options. When the committee was asked for the analysis, they just said, "it was done. See the Phase 1 report". But the Phase 1 report only lists the results of a rudimentary analysis of technical criteria so as to show where off-site solutions MAY be needed, someday. It does NOT compare the options.

So we need to see the analysis before we can assume that there is only one solution. The report does not provide a cost analysis of the options. It only provides conclusions. If they did not estimate the costs of the alternatives, then how did it meet the scope of its work, listed on page ES-1, "Evaluate alternative solutions, wastewater techniques, and technologies, costs and funding..."?

This assumption that there is only one solutoin is especially troubling given the committee's assurances at public meetings and at TM that the report provides a "menu" of options. Instead, the report provides a single solution for West Acton, for example, as outlined by "the" proposed layout.

And although we have been given assurances that there is a menu of options, the continued reference to "the solution" rather than "the potential solution", or "the potential solutions" strongly suggests that instead of a menu of options, there is only one solution presented.

* Overall Comment 2: AFTER ASSURANCES THAT WE CAN CHANGE THE REPORT, IT IS NOW UNCLEAR THAT WE CAN CHANGE IT AND/OR TO WHAT DEGREE WE CAN CHANGE IT

The committee assured Town Meeting that the report is merely a "menu of options". But right after TM, we were told that, "no, we can't change the report", now that it's been voted on. Then we were told that we couldn't change it because we've submitted it to MEPA. Now, after the MEPA meeting, we are told that we can't change it after the state approves the report.

If we can NOT change the report, then the TM vote should be null and void, since the committee assured TM that we can change the report. The public comment after TM strongly suggested that the priorities need to be revisited. We were told, "don't worry, we can change it later". If we can't change the priorities as laid out in this report, then we should revoke the TM vote, ask MEPA to send the report back, and revisit the priorities to make sure that they are final BEFORE we send in the report.

Recently, the Sylvia St neighborhood came forward asking to be a high priority for sewering and the committee stated that it would be difficult to change the priorities in the report. The committee PROMISED us at Town Meeting that the plan/report was flexible. The committed PROMISED us that we would be able to change things. This makes the committee's rather bold suggestion that there is only one solution even more troubling, since we are told that the plan is flexible, yet we are repeatedly told in the report that there is only one solution. They can't have it both ways:

- Can we change the priorities outlined in the report?
- Can we change the priorities for the potential solutions within each needs area?
- Can we change the boundaries of the needs areas?

I suggest that the committee's Power Point presentation be included as part of this report. We have asked to see the slides and have not been provided the slides. Perhaps if MEPA asks for the slides, then the slides will be provided.

* Overall Comment 3: THE TOWN HAS NOT DECIDED THAT MORE SEWERING IS BETTER THAN LESS SEWERING

The Town has not decided that "more sewering" is better than "less sewering", as a general philosophy. Yet the report has many references to the "need to use up the capacity of the existing plant". The report acts as though sewering is an "assumption" rather than an option.

In the CAC meetings that I attended leading up to the release of the draft Phase 2 CWRMP report, several things caught my attention. Most importantly, there was a very vocal minority that repeatedly voiced the opinion that the town should do as much sewering as the plant's capacity will allow, because "sewering is the best thing for the environment...for the town...because the town wants development." And "we should optimize the current plant". Secondly, it was stated upon several occasions and then eventually taken for fact that if additional capacity is possible that the town should pursue that as well. These assumptions were founded on references in "other town reports" that economic development in the village centers is a key priority for the town and that development in general is a key priority.

Yet the assumption that we should sewer as much as possible based on references to Smart Growth on "other town reports" is a flawed assumption. Proper wastewater planning should start with the assumption that a town should minimize the impact to the town. Proper wastewater planning should start with a determination IF/WHERE off-site solutions truly are required. To start with the assumption that sewering is a "goal", and then prepare a document to justify such is a dangerous governmental policy.

The citizens have been told that Smart Growth is a "good thing", and in general the public seems to buy the idea that if there's development that we should encourage it to be in the village districts. BUT the public does NOT seem to want to encourage development in general. This sentiment is expressed in the citizens petitions of 2004 where hundreds of people signed a petition calling for controls on the rate of development. Those petitions were signed in a matter of days.

* Overall Comment 4: THE CITIZENS HAVE BEEN MISLED. THEY HAVE BEEN TOLD THAT THEIR DRINKING WATER WILL BE AT RISK UNLESS THEY APPROVE "THE PLAN"

In several public meetings, the committee told the public that their drinking water is at risk and that they need to approve "the" plan (see comment above entitled "A Solution Looking for a Problem"). The presentation that the committee has been giving revolves around how risky it is to "do nothing" and how critical it is to start sewering right away. While sewering might be a solution that is needed immediately in

one part of town, the justification to start sewering immediately for more than that area is NOT valid (see comment above entitled "A Solution Looking for a Plan"). And to suggest that the situation would be dire if we do not move towards implementing THE plan, by applying risk issues to the entire plan that are applicable only to a small area served by that plan is quite misleading.

It is generally agreed upon that sewering Spencer/Tuttle right away is justified. BUT extending the sewers to West Acton does NOT appear to be linked to water safety in the planning horizon (see comments below entitled "Lack of Technical Need to Justify Sewering WAC on Grounds of Safety".) Therefore, it was misleading to use comments which would lead the public to believe that it would be dangerous to not start sewering West Acton Center right away.

Furthermore, because the committee itself consists primarily of non-technical people, the committee's ability to understand the consultant's analysis is limited. And the committee's ability to properly analyze options is limited.

* Overall Comment 5: A SINGLE PLAN SHOULD NOT BE "SOLD" TO US

The CAC appears to be committed to doing as much sewering as possible so as to further economic development and housing agenda. On page 2-6, the subject report refers to the committees "ability to convince Town Meeting that the recommended plan is THE correct plan". If public input was properly incorporated, there would not be a need to "sell" a plan.

I believe that a committee should not be invested in a single solution so that the committee is put in a position of having to "sell" a single solution. I am not the only one that believes that Acton has far too many committees that sell a single solution. The committees because they are so invested in that solution, they are not always forthcoming regarding the drawbacks of that solution. For example, the committee did not present the analysis showing the increased development expected from "the" preferred solution.

We need to have committees that prepare options for TM so that the voters can decide important issues, like whether to prioritize economic development over town character in a particular area of town. These are important issues and left to a few people to decide, it is too easy to slant the results in favor of the agenda of a vocal minority.

* Overall Comment 6: PUBLIC INPUT WAS NOT PROPERLY CONSIDERED. THE PRIORITIZATION PROCESS WAS FLAWED AND MUST BE FIXED

The CAC claims that public input was carefully considered, yet at the meetings that I attended in 2005, when the report was being developed, public input was virtually ignored. It may have been "listened" to, but it was not acted upon. Nothing changed in terms of major priorities or the process for determining the priorities because of these meetings. Public concerns were not even mentioned in the report itself, except in the appendices. But I was at those early meetings. And there were MANY verbal comments that were ignored. We were told at the first public hearing that it was too late to comment on the priorities. So where, exactly, is the public invited to contribute? The public should have a chance to vote on whether economic development is a more important factor than other things like helping citizens with failed septic systems.

Furthermore, we were assured that this plan would not be implemented "except for reasons of safety/water quality". I would like to see that in writing or I would like a vote so that the public can decide if it wants to implement plans that are primarily motivated by economic development.

There are factors listed in Table 2-4 which indicate that several areas should be considered higher priority than West Acton, when one considers only water quality.

At the meetings that I attended, before the first public hearing, I was told, "the committee already prepared the criteria for prioritization". When I asked when this was, I was told, "at the other meetings". When I asked where the public input was to that process, I was told, "we used input from other town reports". Yet,

when I pressed about why criteria such as "economic development" was such a high priority, I was told, "because it says that economic development in the villages is a high priority."

We are told recently that the process is "about to change" that there will be a more open method for determining priorities and that the public will be more involved in that. BUT that has not happened yet. So I state here that the report as submitted does not reflect proper involvement of the public.

I believe that part of the reason for the lack of public participation is that the report is titled "Water Resources" instead of "Sewer Expansion". And the committee was titled, "Citizen Advisory Committee". Instead, I believe that it should be called the "Sewer Expansion Committee" or something more descriptive. Because of the misleading names, it was not clear to the public until recently that the report was focused so much on sewer expansion. The vast of this report is focused on sewers, either justification for, or the actual laying out of plans for.

Overall Comment 7: A DESIRE FOR SMART GROWTH DOES NOT NECESSARILY EQUATE TO NEEDING MORE SEWERS

The CAC uses the logic that because the town considers economic development to be a high priority; that this sentiment is expressed in "other town reports". Yet when I go and look at the "other town reports", I find references to economic development to be "Smart Growth" oriented. The references suggest that the town wants to "encourage" economic development in village centers WHEN/IF development is unavoidable. It does not appear that the town wants to encourage development in general...or to help make more development in general. It's to make zoning and other incentives so as to direct development to certain areas. It's NOT to encourage development in general.

In other words, just because the town likes to think in terms of these Smart Growth tenets, does not mean that it wants to go as far as sewering an area so as to promote economic development. It does not mean that a small number of people want to pay for such a thing. It does not mean that the town wants to encourage THAT much development in a historic district.

Statements in other town reports about Smart Growth do NOT equate to wanting sewers. There are lots of ways to promote Smart Growth without installing sewers. And just because a report talks of Smart Growth does not give the CAC license to assume that sewers should be a high priority for the town.

* Overall Comment 8: THERE IS A DISTINCT LACK OF TECHNICAL NEED TO JUSTIFY SEWERING WEST ACTON CENTER ON THE GROUNDS OF SAFETY

Table CCC in the Phase 1 report shows the results of the correlation and interpretation of several technical factors. It does not appear that sewering WAC is all that dire. So the references in the report to their being a high priority need is NOT based on technical need, but rather other factors. Therefore, it is critical NOT to mislead the reader to thinking that sewering WAC is "required" or "needed", but that it is optional. And because it IS optional, linking it to Spencer/Tuttle is inappropriate.

This lack of analysis is symptomatic of a general lack of analysis in the entire report. There is no sensitivity analysis comparing scenarios for implementation of various solutions. There is no comparison of the timing of different proposed solutions. There is no cost analysis of the different technological alternatives at all. This lack of analysis puts the voter at a distinct disadvantage, especially if they reside in one of the needs areas and are actually going to pay for "the" plan's implementation.

It was noted by the committee in the meetings that Gates/Douglas schools "needed" sewers and that this was a strong justification to sewer West Acton Center. BUT upon discussion with the schools, it became clear that the schools were not necessarily in "need" of sewers. Sewers are one option for a future need. And when that need will exist is not entirely clear. It might not be needed until after the planning horizon! But the committee did not disclose this information to the public.

Data from the Phase 1 report which suggests that WAC is NOT a needs area that is worth of being High Priority:

Figure 5-2 shows the recommended Wastewater Management Districts. Notice that WAC is not even listed as a suggested management district. Spencer/Tuttle and Indian Village are the only parts of West Acton listed.

In Section 5.6.4 of the Phase 1 report, note that Acton's requirements for on-site systems are more stringent than the state regulations. As a result, it is not clear how many of the "mounds" would be required if the town adhered to "state-level" regulations instead of the more stringent town regulations. As a result, it is not clear how many of the mounds that "might" be required in WAC could be waived and still adhere to state level regulations, which we assume would still protect our drinking water.

Figure 5-9 shows that the proposed area of WAC has "well drained" soils.

Figure 5-10 shows that the proposed area for sewering of WAC is "favorable for on-site solution". This for virtually the entire built up part of WAC. Granted some areas of WAC are not favorable for on-site, but those areas tend to be wetlands and undeveloped properties.

Figure 5-11 shows that the proposed area for sewering of WAC has a depth to groundwater of greater than 6 feet. This designation is the best designation possible in this figure.

Figure 6-1 shows that the proposed area for sewering of WAC is deemed, "On-site Wastewater solution-Likely Possible"

There appears to be overwhelming evidence from the Phase 1 report that West Acton does not "need" sewers for health and safety reasons. Since the report itself says

* Overall Comment 9: THE ANALYSIS USED TO DECIDE WHETHER/WHEN TO SEWER WAC SHOULD BE SEPARATE FROM THE ANALYSIS USED TO DECIDE WHETHER/WHEN TO SEWER SPENCER/TUTTLE

Because the West Acton Center is so different from Spencer/Tuttle, to link them together and present one single analysis regarding whether to sewer them together is inappropriate. The desire to sewer WAC is driven by economic development and asthetics. The desire to sewer Spencer/Tuttle is primarily due to Title 5 failures and high water table issues. Therefore to present "a" single solution which has both neighborhoods linked and present only one set of figures for the "total" solution in an "all or nothing" vote is inappropriate.

To link the two holds Spencer/Tuttle hostage in a sense. The town feels sorry for the neighborhood because of all of its septic issues. And to present a single solution in an all or nothing vote gives the average citizen an untennable position. If they feel sorry for the Spencer/Tuttle resident, then a yes vote would require WAC residents to pay for sewers they may not need. So the two areas MUST be voted on separately. And the analysis for both areas needs to be prepared separately.

For example, the following three scenarios could be examined:

- Spencer/Tuttle alone
- Spencer/Tuttle and WAC
- Spencer/Tuttle with the facilities to allow the WAC extension to be deployed later

There is the argument that if WAC isn't done when Spencer/Tuttle is done, then WAC won't be able to stand on its own. This argument implies that Spencer/Tuttle would be subsidizing an economic development plan that they don't need. Either way, the two should be analyzed on their own.

* Overall Comment 10: THE DELINEATION OF NEEDS AREAS SHOULD HAVE INCLUDED PUBLIC INPUT

The delineation of the boundaries of the needs areas was done fairly randomly. I attended one of these meetings and it consisted of non-technical people drawing lines on maps around where they wanted economic development and affordable housing. I asked for where I could find the justification for these boundaries and I was told "the Phase 1 report". But the Phase 1 report does not provide specific boundaries for the needs areas.

Furthermore, by the time the public was asked for comments, the committee had decided that the boundaries were quite fixed. When we asked for how the boundaries were decided, we were not provided answers. To get answers, a group of neighbors had to get together and hold a meeting and insist on getting the answers. Upon getting the answers (see Attachment 2 of these comments), the committee decided to change the boundaries of that particular needs area to eliminate that neighborhood from the needs areas/needs planning areas.

What about the other neighborhoods? What do they have to do to get themselves removed from a needs area and/or needs planning area? Why did this other neighborhood have to cause quite a stir before being able to see how the boundaries were created?

* Overall Comment 11: In the Phase 1 report, 6.10, there is a discussion of the increase in development that would be expected if certain areas are sewered. The Phase 2 report should discuss these impacts as well as part of the impact analysis of the different options for off-site solutions.

* Overall Comment 12: The report neglects to mention the recent increase in private wells for the purposes of irrigation (i.e. lawn sprinklers). The town has not discouraged this trend. Nor are the figures for water use inclusive of water used via these private wells. So it is difficult to see how this report can be a holistic view of water usage without including this important water usage information.

* Overall Comment 13: My original comments to the Phase 2 document, which were included in Appendix J were obscured behind an email exchange clarifying a detail in the document. I would like those comments to be separated from the comments regarding the Phase 2 document itself.

* Overall Comment 14: I wholeheartedly agree with Allen Nitschelm's comments to MEPA. Allen has become a trusted member of the Finance Committee and he has taken the time to become knowledgeable about the issues relative to the CWRMP. I also trust the comments by Carol Holley and Mary Michelman. Carol and Mary have a technical background that rivals professional engineers. As an engineer myself, with a Master's Finance, I find that all three of these people are capable analysts. And while I check the analysis of everyone, I find that the logic that they use to present their analysis is quite good.

* Specific Comments, by page:

ES-1, paragraph four: The words, "The Town of Acton and" was added to this report after TM, implying that the Town of Acton has concluded that "based on the elements of the CWRMP which have adequately addressed the elements and substance of an EIR,....an EIR is not required." See Overall Comment above, entitled, "The Citizens have been Misled".

ES-1, paragraph five: "This Phase 2 report serves as both the final report..." and "The report evaluates alternatives to provide a 20-year plan for water resources in Acton". See Overall Comment 8, entitled, "There is a Distinct Lack of Analysis to Justify Sewering WAC on the Grounds of Safety". The report barely evaluates the alternatives. It provides a table with bullet points and some discussion in the text. It does NOT provide an analysis of the alternatives. It does NOT provide a detailed analysis of the costs of the different options. To claim that the report evaluates the alternatives is quite inappropriate. Either the analysis should be presented, or the report should be held until the analysis CAN be presented.

ES-1, paragraph six: The list of bullet points for the Phase 2 scope of work includes the statement, "Evaluate alternative solutions, wastewater techniques and technologies, costs and funding", yet in this report there very few details about cost. And there is zero cost analysis of the options. Therefore, it seems that the scope has not been met. IF the analysis exists it should be presented. If it is not, the report should be held back until the analysis CAN be presented and the priorities revisited to reflect the results of the analysis.

ES-1, paragraph seven: It should be noted that the number of meetings increased because of a public outcry that the report was not ready for submittal.

ES-1, paragraph eight: "The CAC was instrumental in setting priorities and selecting solutions". That is the problem. It was "too" instrumental. See Overall Comment 6, entitled, "Public Input was not Properly Considered. The Prioritization Process was Flawed and Must be Fixed."

ES-2, paragraph two: "The result is a holistic approach to management of drinking water…" If the scope of the report is focused on wastewater, how does this result in a holistic approach to management of drinking water? I suggest that 90% of this report is focused on wastewater.

ES-2, paragraph two: Here again, the report implies widespread public participation. See Overall Comment 6, entitled, "Public Input was not Properly Considered. The Prioritization Process was Flawed and Must be Fixed."

ES-3, list of priority areas: These lists are missing Colonial Acres, Handley Woods, and North Acton Condos, all areas included in the report which was voted on at TM. These changes should either nullify the TM vote to approve "the" plan in the report. OR it should be proof that we can change the priorities in the report.

ES-4, subsection titled, "Structural Solutions": Note that this whole section is devoted to centralized disposal (aka sewers). It does not discuss cluster systems. See Overall Comment, "A Solution Looking for a Problem."

ES-4, paragraph eight, references to Wetherbee lands. The report should note that strong public opposition exists to exploration of these lands for disposal. Two major town committees have written comments regarding this. These committees agreed to support the approval of the document if there could be assurances that these lands would be protected. The Selectmen and the committee assured the public on several occasions that the committee is not pursuing the use of these lands for disposal, yet the report still contains language suggesting that the committee will "clarify the inaccessibility of the Westherbee site to determine if this parcel is a nonviable alternative for East Acton…" I personally sat in on one meeting where one committee member suggested that the committee should look for ways around these restrictions. The other committee members agreed. I suggest that the Selectmen make a decision one way or the other and not leave this issue vague. The statement in the report suggests that the town will "clarify" whether the property can be used, but then in the same sentence says that "no further active evaluation is proposed for this parcel." No action is what I was led to believe would occur. Yet the sentence still says that the town will "clarify" if the land can be used.

ES-5, paragraph 1: The citizens are repeatedly told that there is not enough staff time to devote to protecting the character of the town from the impacts of development, yet, there appears from this paragraph that there is enough staff time to support pilot studies for ways to promote water treatment, which can result in more development.

ES-5, paragraph 1: It should be noted that there was a public outcry from two town committees that the plan to test IPR in Acton was not desired. References to a pilot are still in this report.

ES-6, paragraph 4: West Acton Center should be removed from the high priority list. See Overall Comment 8, "There is a distinct lack of technical need to justify sewering WAC on the grounds of safety".

The technical justification has not been presented to the residents of West Acton Center. The costs have not been estimated on a per-property basis. The statement that "extentions...should be prioritized to serve...WAC" is preliminary at best. Worst case, it's irresponsible.

ES-6, paragraph 4: The reference to the schools should be taken out until which time the schools determined that an off-site solution is required/desired. Or that language should reflect a "potential" need.

1-1, paragraph 1: Describing the sewer project financing directive in the first sentence of the body of this report is symptomatic of an overall issue with this report. See Overall Comment entitled, "A Solution Looking for a Problem."

1-2, paragraph 4: This description of the scope of work focuses on off-site disposal solutions. See Overall Comment entitled, "A Solution Looking for a Problem."

1-2, paragraph 4: There is only one design presented in this report, not "designs" in the plural.

1-2, paragraph 4: The "input received at public meetings" was AFTER the report was finalized

1-3, last paragraph: The only "thorough analysis" that has occurred was in the Phase 1 report.

2-17, Section 2.5.1, entitled "Collection Systems Technology". This should be moved to be under 2.5.6, because its focus is solely on sewers.

2-21, Section 2.6, entitled "Evaluation of Structural Solutions". I am not an environmental engineer, but it seems odd that the evaluation of structural solutions would start with "Potential Disposal Locations". This action assumes that structural solutions are off-site. It assumes that structural solutions need additional capacity beyond existing sewer plant.

2-22, last paragraph: It should be noted that the digging of test holes in the conservation land was done without permission of the Selectmen and without permission of the Conservation Committee, and without the permission of the Land Use committee. We were told that the test holes were a natural outgrowth of the direction of the CWRMP. That was when we started realizing how focused the CAC was on sewer expansion rather than on the examination of alternative solutions.

2-24, paragraph titled "Conclusions". This section appears to be to examine "Structural Solutions". Why does it not examine disposal sites for cluster systems? Or are they the same sites as for sewers?

2-24, paragraph titled "Recommendations". Again, this is focused on solutions for more sewers.

2-24, section 2.6.2, titled, "Reclaimed Water Use". There should be a mention in the report of the public outcry against piloting IPR in Acton.

2-29, section 2.7, titled, "Evaluation of Non-Structural/Management Solutions":

a. There is no discussion about process relative to how a property owner can appeal the inclusion of a property in these districts. The "needs" areas have been laid out by this report. By the state's approval of this report, does that mean that a property's inclusion is irrevocable?

b. There is no discussion regarding how the boundaries for these districts/needs areas were laid out. I personally attended two of the meetings where the boundaries were discussed and it was very casual in nature. A couple of people just drew lines around areas that they wanted to develop. And later when someone identified that an area had not been included, the line was redrawn. If the process is this casual, then the property owners themselves should really be included in the line drawing BEFORE the state approves these boundaries.

c. I wholeheartedly approve of Allen Nitschelm's suggestion that we have a management plans that looks at a property owner's performance with regard to pumping and have the "management fees" apply only if that owner does not comply with a reasonable pumping frequency.

d. See Attachment 2, the email thread regarding Forest Glen's neighborhood meetings and how the neighborhood was subsequently removed from the needs areas because of the meetings. Note that I have asked for the analysis for my neighborhood, and have not gotten this kind of detail. I would like to know what the process is for getting the written discussion regarding the boundaries of these needs areas so that the property owners in those needs areas can dispute their inclusion, if appropriate. I have asked for this analysis and have not received it. Is the analysis and therefore the process for being taken out of a needs area only for certain people/neighborhoods to enjoy?

2-32, section 2.8, titled, "Alternative Analysis and Preferred Solutions"

a. We have repeatedly asked to see the analysis of the options, and have been given only summary tables and textual discussion. See the emails and meeting notes included in Appendix J to see a partial history of our asking for this information.
b. The report states, "The Project Team withheld estimating costs until alternatives were deemed technically feasible and implementable". Yet, it seems logical that costs would be part of a feasibility analysis.
c. The report does not provide a cost analysis of the options. It only provides conclusions, which according to the comment "b" above, the committee admits that it "withheld" estimating costs. If they did not estimate the costs of the alternatives, then how did it meet the scope of its work, listed on page ES-1, "Evaluate alternative solutions, wastewater techniques, and technologies, costs and funding..."?

2-34, section 2.81, subsection "West Acton Center".

a. The statement "In the area east of ROW, over 50% of the developed parcels are classified as needs parcels." These parcels are classified as needs parcels, based on factors that are not associated with water safety/quality. See Overall Comment 8, entitled, "There is a Distinct Lack of Technical Need to Justify Sewering West Acton Center on the Grounds of Safety". Take special care to note the references to the Phase 1 technical conclusions which do NOT show 50% of the parcels as needing anything in particular. In fact, a great deal more than 50% are deemed "on-site likely possible." As a result, the statement on page 2-34 should make it clear that the classification is not a water safety issue, but rather economic development and/or asthetics.

b. Why aren't cluster systems discussed specifically for this area? Why aren't potential designs discussed? Why aren't costs examined for these alternatives? The scope of this report is to evaluate the alternatives, but an important alternative for WAC is not analyzed. Granted, none of the analysis in this report is very detailed. But at the very least a potential cluster system should be discussed and the potential costs examined over the sewer option.

c. This section does not mention the impact of sewers relative to increased development. The Phase 1 report is very clear that sewering WAC will result in increased development And there is a discussion relative to the extent of the impact. Yet in the Phase 2 report, it only talks to the benefits of sewering and the feasibility of sewering as much as possible. The bottom line is that there is no impact analysis of the options.

3-1, section 3.1.1: As stated elsewhere in these comments, these recommendations are based on the flawed assumption that the town should sewer as much as possible. See Overall Comment 3, entitled, "The Town has not Decided that More Sewering is Better than Less Sewering."

3-3, section 3.1.2.2: Note that the section refers to "the" proposed sewer layout. There are no options provided. According to the emails included in Appendix J, the details will be figured out later, and that the proposed layout could change dramatically. If that is the case; if the layout can be changed dramatically, then why can't needs area boundaries be changed, and prioritizations be changed?

3-4, last paragraph: Are the pump stations required if the sewers are NOT extended to WAC?

3-6, first paragraph: Note the if there is a major cross-country excavation through wetlands required for this proposed layout, that the difficulties and the environmental risks should be detailed. Otherwise it should be labeled as "very preliminary".

3-6, section 3.1.2.3, first paragraph: See Overall Comment 7, "A Desire for Smart Growth does NOT Necessarily Equate to Needing More Sewers." The references to Smart Growth in "other town reports" seems to be repeatedly used as a justification to sewer.

3-13, first paragraph. References in this paragraph and Table 3-3 refer to "contingency". It is not clear whether the risks referred to "such as unsuitable subsurface conditions and other data gaps", are covered by the 30% contingency estimate or not. This should be made clear and a "worst case" financial scenario should be examined. It should be noted whether this is the same team that made the original estimates in South Acton, which turned out to be 200-300% greater than the early estimates. If these facts are obscured, then this document can be viewed only as a selling document, rather than an operational reference guide.

3-13, Table 3-3. It is not clear how many "parcels" are included in the "Per Parcel" calculation. I counted 204 parcels. And $7,190,000 divided by 204 is $35,245. That is WITHOUT the schools. The reported figure in the table is $32,000. The details of this calculation should be provided here. Furthermore, there should be a range for the "type" of parcel. The lower range of $12,500 in the existing sewer district is misleading. I know of a number of owners in the existing sewer district with single family homes that pay considerably more than that. As a result, there should be a range of estimated costs for a single family home.

3-16, Figure 3-3: This figure uses a 2006 fall Town Meeting as the starting point for design $. However, the Selectmen have assured the public in several meetings that this will not occur.

Appendix J. My written comments are reversed in order of receipt. The comments relative to Lauren's email were when I was first getting started. The subsequent comments were after a bit of analysis was done on my part. Or more correctly after a search for a bit of analysis and it became clear how little of it had been done as part of the development of this Phase 2 report.

Please see the attached: At TM, the committee revised the motion for approval of this report. The language stipulates: "the Draft Report shall not obligate the Town to undertake any particular project or projects or other course of action that may be described in the report."

Attachments:

1. TM revised motion
2. Email thread regarding Forest Glen being removed from the needs area.

Attachment 1

Article 31 – Accept Comprehensive Water Resources Management Report

Ms. Rosenzweig moves that the Town authorize the Town Manager or his designee to submit to the Massachusetts Secretary of Environmental Affairs, for public comment pursuant to the Secretary's Special Procedures Certificate for Project No. 11781, dated December 31, 1998 and supplemented on August 16, 2004, the Draft Phase 2 Comprehensive Water Resources Management Plan Report prepared by Woodard & Curran dated March, 2006, along with an Expanded Environmental Notification Form identifying and describing that Draft Report, subject to the express conditions that:

(a) the Draft Report shall not obligate the Town to undertake any particular project or projects or other course of action that may be described in the report, and

(b) an affirmative vote by a future Town Meeting shall be required to appropriate funds, borrow funds, issue any bonds, or otherwise raise any funds necessary to implement any recommended actions contained in the Draft Report which require such an appropriation, borrowing, bonding, or other financial commitment of the Town Meeting not heretofore made.

Attachment 2

-----Original Message-----
From: Allen Nitschelm
Sent: Friday, March 24, 2006 9:14 AM
To: Doug Halley
Cc: Lauren Rosenzweig; Charlie Kadlec; Richard DeFuria;
Mario Castaneda; Dick Calandrella; Don Johnson
Subject: Forest Glen questions
Hi Doug,

We had an excellent neighborhood meeting last night, and Lauren did a great job explaining the issues about wastewater and the impact of the report. We had a few more questions that I think Lauren wanted you to answer:

1. Can you be specific about the reasons why "Colonial Acres" was included in Area 14? Were there indications from test wells that showed a current problem or a future problem, or was it more the age of our septic system and the quality of our soils? If there are specific reasons, can you give us those reasons?It has been suggested that if people wanted waivers in the future, they'd have to show that they were not violating the reasons for the "needs area" definition. Is this true? And if so, we should know what those determinations are now, before we agree to be part of the defined needs area.
2. Can the report be changed at this stage, and by whom? The Board of Selectmen? A town meeting vote? The CAC? The consultant? If "Forest Glen" wanted to be taken out of Area 14, either to be un-identified as a Needs Area or to have a different priority from Flagg Hill, what would be the procedure for doing so?
3. Can you define what comprises "Area 14"? Which specific streets? The maps and text are not consistent. Sometimes we are referred to as Forest Glen, other times Colonial Acres. The "Squirrel Hill" development has its own system...are they also part of Area 14? How much of Willow street or Summer Street is included? Basically give us a final, exact definition of Area 14.

Thanks,

Allen NitschelmSecond Vice President, Forest Glen Association

>
>
> Doug Halley wrote:
>
>> Thank you for allowing Lauren to come speak to your neighborhood.
>> The CAC encourages interaction and hopes this meeting was beneficial
>> in presenting the concepts of the CWRMP. When you brought up the
>> concerns for Forest Glenn the CWRMP was reviewed in regards to that
>> area. If you note throughout the report Area 14 is described as
>> Colonial Acres/ Flag Hill. If you look at Figure 2-2 "Needs Planning
>> Areas" Area 14 is shown as Ethan Allen Road and the side streets
>> that access it. However, in Appendix H Table 7 Forest Glenn is
>> listed as part of Area 14. Reviewing the data and the full report it
>> is quite clear that Forest Glenn is not in the Area 14 needs area.
>> It was improperly listed in the Appendix. The CAC regrets that this
>> error in the report was not caught prior to the public presentation.
>>
>>>> 1. The primary reason Colonial Acres/Flag Hill became a Needs Area
>> was the record of high groundwater. Colonial Acres has approximately
>> 40+ lots that would require mounds in excess of 1.75'. By comparison
>> Forest Glenn, with more lots, has approximately 20+ lots with the
>> same condition. Colonial Acres/ Flag Hill has also a half dozen lots

>> which require an offsite solution. This generally means the soils
>> are poor and inadequate and the size of a potential septic system
>> exceeds the capabilities of the size of the lot.The concept of
>> wastewater management districts is to apply the appropriate
>> solution. It recognizes that there is enough inconsistency in soils
>> that any one lot in the district may not display the criteria that
>> the other lots display. The BOH currently has a similar process with
>> the Aquifer districts. A property within an Aquifer District has
>> additional compliance levels that must be reached based on the
>> actual conditions of the lot. For instance if the percolation test
>> is two minutes per inch the septic system must be 6' above
>> groundwater. If the percolation test is over six minutes per inch
>> the septic system must be 4' above groundwater. Wastewater
>> Management Districts that utilize compliance levels based on actual
>> conditions are the most effective way of addressing needs without
>> subjecting property owners to achieve compliance levels that are not
>> necessary for their lot.
>>
>> 2. The whole purpose of the CWRMP process is to get public comment.
>> The CAC recommended submitting the report to Town Meeting because
>> they thought a report of this magnitude should receive the input of
>> the Town prior to submittal to MEPA. The CAC is an advisory
>> committee to the Board of Selectmen. The CAC will continue to take
>> in comment and make recommendations to the Selectmen on how the
>> report should be submitted to MEPA. During the MEPA process
>> additional comments will be taken as part of the legal process for a
>> CWRMP. At the end of the process MEPA will than issue a Certificate
>> either accepting the report with or without conditions or denying
>> the report with corrective directions.
>>
>> 3.The Area 14 Needs Planning Area, as shown on Figure 2-2, includes
>> Ethan Allen Drive, Betsy Ross Circle, Paul Revere Road, Patrick
>> Henry Circle, Black Horse Drive, Flintlock Drive, Powder Horn Lane,
>> Ticonderoga Road and 154 & 158 Summer Street. As this area moves
>> forward as a wastewater management district it will be further
>> defined according to environmental criteria. For instance the
>> beginning portion of Ethan Allen does not have any red or yellow
>> lots and may not need to be part of the Planning Area for a
>> Wastewater Management District, however, if a sewer solution was
>> proposed those lots would likely to stay in the Planning Area as
>> they couldn't effectively be bypassed by a sewer line.
>>

Canaday, Anne (ENV)

From: Andy and Barbara Munro [allmunros@msn.com]
Sent: Thursday, August 10, 2006 10:14 PM
To: anne.canaday
Subject: Support for Acton's CWRMP

Anne:

Thank you for your visit to Acton last Thursday. I am a resident of the Spencer/Tuttle neighborhood which is a top priority for the sewer. I fully support the plan, which the majority of our neighborhood of about 400 residents also support.

I look forward to hearing your agency's feedback on the plan, but I am hopeful that things will move ahead quickly to address our clear need for the sewer.

Thank You.
Andy Munro
8 Spencer Road
Acton, MA
978-263-3268

Canaday, Anne (ENV)

From: Don Barron [bobbiedon@comcast.net]
Sent: Friday, August 11, 2006 6:53 PM
To: Canaday, Anne (ENV)
Subject: In Favor of Acton's CWRMP

To: Anne Canaday (MEPA)

I wanted to drop you a quick email to register my firm & positive support for the Town of Acton's Comprehensive Water Resources Management Report.

My neighborhood is one of those identified in the report as a high-priority area, and every one of my neighbors agrees. We definitely want to address the waste water plan for our Flint-Tuttle-Spencer-Mallard area by connecting to the adjacent sewer line which runs parallel to our section of the community as a first and high priority.

I've read the plan and was also pleased with the town's recognition of the total picture of various needs areas.

Thanks for taking the time to read my comment.

Best Regards,
Don Barron
*****
Don Barron
7 Mallard Road
Acton, Massachusetts 01720
Email: Bobbiedon@comcast.net

AC

August 1, 2006

Dear Mr. Pritchard,

I am writing to let you know that I oppose the active pursuit of IPR in Acton and specifically that I oppose the disposal of treated wastewater into Acton' public water supply wellfields, or areas close to the wellfields.

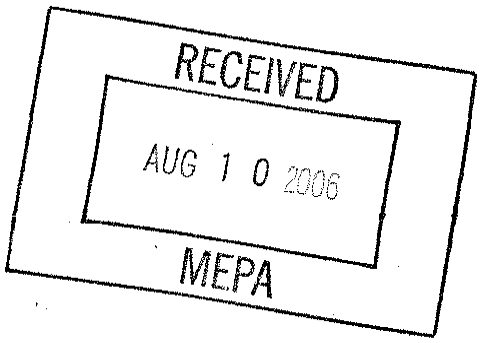
Thank you for your consideration in this important matter.

Carol LoPiccolo

AC

Nancy E. Tavernier
35 Mohawk Drive
Acton, MA 01720
(978) 263-9611
ntavern@comcast.net

August 8, 2006



Secretary Stephen R. Pritchard
EOEA Attn: MEPA Office
Anne Canaday, EOEA #13828
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Pritchard:

I am pleased to submit comments to MEPA in regard to the Town of Acton's recent filing of their Comprehensive Water Resources Management Plan. I have been a volunteer participant in waste water issues in the Town for over 20 years and have a strong knowledge of these issues from a layman's point of view. I have followed the issue as a citizen activist, as a former member of the Board of Selectmen, and as a member of the Citizens' Advisory Committee for the CWRMP. My focus has been primarily that of educating the community about the important issue of wastewater disposal.

The strength of the CWRMP is its clear presentation of the findings of the CAC, the Health Department, and the consultant Woodard and Curran. This planning document will serve the Town well for the next 20 years. The Plan is very readable and, in combination with the Phase 1 findings, presents a complete package of all the research and recommendations that were developed by the Town, its consultant and the CAC. The implementation of the Plan will be a challenge but not unlike our previous challenge of bringing the first public sewer to Acton. We began that effort in 1984 and saw it come to fruition in 2001. When we began that quest, many residents were opposed to sewers, today very few oppose. In fact, there is great interest in expanding the sewer district to serve other areas of town where on-site systems continue to be an environmental and economic challenge for property owners

In maintaining my focus on consumer education, I would like to encourage ongoing development and permitting of innovative and alternative on-site systems, especially the technologies that will be feasible and economic for single family homes. There is a great need to

allow for more aesthetically pleasing systems than the traditional mounded systems with denuded lots that we see every where in town. I have to look at my neighbor's ugly system painfully every day with the knowledge that it cost her $45,000 to install it. It is Title 5 overkill in my opinion. We can and must do a better job than that.

In just the time period of developing the CWRMP, much advancement has been made in on-site solutions. There is a greater awareness among the property owners about septic systems in general and the need to recharge our groundwater safely. The information in the CWRMP has been disseminated widely in the town and those who were interested enough to learn about water resources and waste water disposal options have done so and will continue to have opportunities to be better informed as the Plan gets implemented. Now that the EPA has decided certain septic system designs can be considered permanent solutions, government needs to permit more experimentation to produce more innovative systems. Because the Town of Acton has very limited discharge sites for effluent, we will need to be particularly creative but responsible about the solutions we propose. Hardened positions for or against these options will not be beneficial to the community.

I would like to applaud our Health Department Staff, Director Doug Halley and Deputy Director Brent Reagor for their most professional guidance throughout the development of the CWRMP. Their dedication to protecting our water resources while addressing disposal problems is first rate.

I urge MEPA to accept the Plan and allow us to proceed to the very long Implementation Phase, a process that I will continue to support.

Sincerely,

Nancy Tavernier

Canaday, Anne (ENV)

From: Allen Nitschelm [allen@thehomesteader.com]
Sent: Monday, August 14, 2006 12:54 PM
To: Canaday, Anne (ENV)
Cc: fincom@acton-ma.gov; Doug Halley; allen@thehomesteader.com
Subject: Comments on Acton's CWRMP

RE: EOEA No. 13828/11781 Acton Comprehensive Water Resources Management Plan

August 14, 2006

Ms. Anne Canaday
MEPA
c/o Secretary of Environmental Affairs
100 Cambridge St., Suite 900
Boston, Massachusetts 02114

Dear Anne,

Thanks for coming out to Acton to discuss our CWRMP report that we submitted to MEPA. Please email me back to acknowledge receipt of this email so I don't have to FedEx these comments to you by tomorrow's deadline!

I have a few issues I wanted to raise...and I'm not sure in the process if they are questions you would address, or issues your office would consider when approving or changing the CWRMP report. But since you stressed the importance of sending in written comments prior to August 15th, here are my comments.

I have eight areas of concern.

1. THE SCIENTIFIC VALIDITY OF NEEDS AREAS

After reading the report and reviewing the appendices, I did not find much information on how the Needs Areas were ranked from an environmental point of view. This is a critical issue because deciding where to expand sewers should be based mostly on environmental need. Instead, the report and spoken comments made by CAC members indicate that the environmental needs have not been ranked and in fact all Needs Areas were assumed to be equal.

On page 29, the report states, "The CAC agreed that all of the technical criteria addressed environmental concerns and are therefore of equal rank, but some 'non-technical' criteria are more important than others." For an environmental impact study, isn't the ranking of environmental concerns paramount?

Without an environmental ranking, one cannot know if an area being considered for sewers is close to failure or will be fine for another 20 years, while an area being passed over might be in dire straights in three or four years.

Bringing sewers to areas that are most needy as the first priority makes sense because the technology might change in five or 10 years so there could be other options for less needy areas in the future.

It is possible that a very needy area would have an off-site solution that would be equal to sewers, but the report should still be clear on which areas are most in distress, what the best solutions are, and then look at whether sewers can be extended to serve them or not.

This is also a critical issue when one is requiring property owners to pay the cost of expansion. They should not be required to pay to extend sewers to their property when the justification for it may be mostly non-technical (i.e.,

based on issues other than environmental need, like economic development, affordable housing, or aesthetics.)

On page 138 of Appendix B, members of the CAC state:

"West Acton Center is a priority which is where economic growth is targeted according to other Town plans. Serving West Acton Center would address Planning Board goals." And "Affordable housing is difficult to institute in West Acton because there are no sewers." This shows a potential bias towards sewering West Acton rather than other sections of town that might have a higher environmental need.

When I asked about this issue at the meeting you attended, I was told that Appendix H had some sort of ranking of environmental concern for each need area, but I did not find this to be the case.

The only information I found in the report that seemed to have some scientific backup was a chart from a memo by Woodward and Curran titled "Figure 3: Maximum Service Areas" which showed the 15 Needs Areas, the number of properties requiring off-site or mounded solutions, and the number of properties with "no problem."

From this chart, I calculated the apparent problem rate and compared it to the CAC's Preferred Solutions Matrix (Table 2-8 in the report) and came up with this chart:

Needs Area	Percentage of Properties with problems	CAC Priority
2	83%	Low
7	67%	High
10	62%	High
8	60%	Medium
6	47%	Low
1	45%	Medium
9	43%	Low
11	41%	Medium
3	36%	High
12	34%	High
5	32%	Medium
4	31%	Low
14	30%	Medium
15	29%	Low
13	25%	High

There appears to be little correlation between Needs Areas with the highest problem rate and the CAC ranking of Needs Areas in the report.

I think it is important and necessary to show a scientific basis for why sewers are needed in Areas 3, 12, and 13, and ahead of other areas which appear to have at least as strong of an environmental argument for sewers, based on the very limited information presented in the report. If there is more information of this nature, it should be made public.

In short, the report should have more information on the environmental need for each Need Area, independent of other important and useful considerations. I would go a step further and suggest that the experts try to determine, in an absolute sense, how much time each Needs Area has before a solution would be required. (This gets to my next point, which has to do with the timing of the recommendations.)

I do not believe we should be moving forward on sewering West Acton until we have more information on the environmental need (or environmental crisis, if that is the case) of each Needs Area, which should include a ranking of each Needs Area by environmental need and an estimate of when a solution would be required from an environmental point of view.

2. SEWERING WEST ACTON IS PREMATURE

I am concerned that the specific recommendation of expanding the sewer system into two Needs Areas, Flint/Tuttle and West Acton, while bypassing other Needs Areas, is premature.

There are inconsistencies as to how much additional discharge we have at our current facility. We do not know:

- If and when we might get additional discharge;
- How much our current system is underutilized and if we can increase discharge based on this argument;
- If there are other options for discharging waste from the Adams Street facility. (It seems like the analysis for the nearby land with the vernal pool was not completed.)

Our sewer system was built to handle 500,000 or more gallons, yet we are using less than 200,000 gallons (I think it is much less than that) and are permitted to go up to 299,000. Yet the current expansion plan only shows 49,000 gallons available. We should not finalize any expansion plan until we know exactly how much we can increase the system, or at the very least, exhaust all reasonable efforts to request additional increases before we move forward.

Nearby neighborhoods that have requested hookup have been told that there is lack of capacity. Yet that seems to still be an open question.

If a significant increase in our ability to discharge sewer waste were granted, it could significantly affect our sewer expansion decision. For example, some neighborhoods, like Indian Village, might make more attractive candidates for sewer expansion. And it might make economic sense to do one expansion encompassing all areas rather than two or three additional phases.

I would welcome hearing any comments or advice you had on whether you think we can get additional capacity for our sewer discharge.

3. COSTS NOT BROKEN DOWN

First, from a financial point of view, we need to know the estimated costs of sewering each Needs Area (except for areas that are totally impractical to sewer), and how much money could actually be saved if we sewer multiple areas at once.

I believe the Flint/Tuttle neighborhood (Area 10) is a very strong candidate for sewering, and have heard no objections from neighbors of moving forward in this area. I see little reason to rush toward sewering West Acton when there are still many open questions: financial, capacity of our current sewer system, and environmental need. But the argument has been made that we should move forward on West Acton because we would save money if we do one expansion instead of two. This needs to be detailed. We should have a cost breakdown of sewering Flint/Tuttle, sewering West Acton, and sewering both at the same time.

If the Flint/Tuttle neighborhood were satisfied with being given Title V waivers for a short period of time, we would have additional time to get more financial information on the various options so that these considerations can be considered. How much money do we save by sewer two (or more) Needs Areas at once? Would it make more sense to just do Flint/Tuttle and give us more time to study the other options? How important is it from an environmental point of view to sewer Flint/Tuttle immediately, or how long can we wait?

Can we wait and expand to three or four Needs Areas in the near future instead of two immediately? Would that save money as well?

Second, those residents in defined Needs Areas have not been told what their costs might be in the future, yet their designation of being in a Needs Area may be irreversible. Since Needs Areas will affect many residents, it should be clear what the cost ranges are to the property owner for each possible option. Putting the least expensive option on the table will give affected residents the information to support or oppose, as well as place some sort of limit on what the cost might be in the future. (if we are told it will cost $200 per year, and the program ends up costing an estimated $800 per year, we would be able to reject it based on cost.)

We should not finalize Needs Areas with the potential cost of being in a Needs Area not clearly defined.

4. ZONE 2 AREA NOT DESIGNATED IN REPORT

The chart on page 22 shows the "zone 2" areas in Acton.

One Needs Area, I believe it is Area 8 (Maynard border), has recently been discovered to be in a Zone 2 area because of some new wells developed by the town of Maynard. This information should be included in our report as it could make a significant difference to the final recommendation, and the committee should review the Needs Areas prioritization list to see if changes are warranted.

5. WEST ACTON RESIDENTS NEED TO WEIGH IN

The cost of expanding the sewer is born by those who can connect. Property owners are forced to pay this if the sewer goes by their property. Thus, the decision as to where to expand the sewer must be based wholly on environmental and economic concerns (i.e., what areas are of greatest need, and what areas are affordably accessible to the present system.)

Simply put, it is inappropriate to force local property owners to pay for a sewer expansion for affordable housing, economic development, or aesthetic purposes, and yet the criteria to sewer West Acton seems to be based at least in part on these considerations.

Further, there has been no "buy-in" from the West Acton residents for this expansion. If we have excess capacity and the residents of West Acton are overwhelmingly in favor of paying for a sewer expansion in their neighborhood, then that would be fine. But we should not designate a specific neighborhood for sewers based partly on non-environmental issues without the consent of the people in that neighborhood.

A better estimate of the cost of expansion should be given to these residents and they should have a chance to decide if they wish to encourage this expansion or oppose it. And they would have a very strong argument in opposition if other neighborhoods had a stronger environmental case for sewers.

The current plan is to ask what they want after the report has been approved, which is backwards. If the report is approved and the residents end up opposing the expansion of the sewer system to their neighborhood, where does that leave us?

We should list West Acton as a possible sewer expansion area (without deciding that sewers are the best solution) until we have some positive feedback from the neighborhood.

6. ABILITY TO OPT OUT UNCLEAR

Can property owners who are inside a defined Needs Area opt out of any common solution, or will this report, once approved, require the participation of all property owners within a Needs Area?

At the meeting it was stated that Needs Areas were purposely made as large as possible, because it was easier to make them smaller than trying to make them larger down the road. But you said the report, once approved, couldn't be changed. If the report can't be changed, then we need to look at constricting the Needs Areas to only cover properties that are truly in distress, or specify an "opt out" procedure so that property owners who really shouldn't have been included can be removed.

Without a clearly defined "opt out" option, there could be tremendous pressure on property owners or the town to not allow anyone to "opt out" since it would raise the costs for the remaining participants, even if the property owner should not have been included in the first place.

If your office has no problem with reducing the size of defined Needs Areas in the future, then this point is moot. My concern is that some may use the approved report to coerce or require participation by property owners who should not have been put in a Needs Area in the first place.

7. NO DATA ON COMPLIANCE

I don't recall seeing any hard data in the report on current compliance with regulations requiring bi-annual pumping of septic systems. It has been stated, "doing nothing is not an option" for a defined Needs Area, yet this

supposes that the current system is not working. If that is the case, then evidence of widespread failure to pump private septic systems should be presented in the report.

If a Needs Area were in compliance with the current requirements, why would an additional layer of bureaucracy be required? "Doing nothing" should be available whenever the solution of town monitoring is offered. Town monitoring should only be imposed when local property owners have demonstrated their unwillingness to do bi-annual pumping, and not before, or when there is a widespread failure in a neighborhood, which does not seem to be the case in any areas that are not currently being addressed. If it is the case, then it should be presented in the report.

If the town has evidence that the regulations are being ignored, then it should first attempt to get people to comply by providing more public information, and maybe send a reminder to homeowners who have failed to get their systems pumped for three or more years.

If a neighborhood in a Needs Area is still generally out of compliance after repeated warnings, then it would be appropriate to force compliance through a town-monitoring or inspection system.

As a local property owner, I cannot recall receiving any instructions on septic pumping requirements. I have heard from some neighbors that they knew nothing about having to pump their system every two years. There seems to be widespread lack of awareness of what is required now.

If there is evidence that failure to comply with this requirement is causing, or could cause, environmental harm, then the cheapest and best method is a public information campaign followed by an analysis to see if it is working. I am unaware of any such effort.

I would suggest that before we say "doing nothing is not an option" in any Needs Area that the town show that a Needs Area is either failing, about to fail, or not in compliance with the less-stringent septic pumping rules now in effect.

In short, we are assuming that the current system is not working when there is little data shown to support this hypothesis, and no plan to try to get the current system to work better (if it is failing) before going to a more expensive solution.

8. DOCUMENT APPROVAL UNCLEAR

What does it mean to have your office approve this document? We have been given conflicting answers to this question, yet this question has been asked in many forms repeatedly during the last few months.

Once the report has been approved, would your office have any problem with any of the following:

* if the town decides to sewer only one Needs Area instead of two
* If we decide to sewer a different Needs Area other than the two areas in the current report?
* Reduce the size of a Needs Area?
* Change the priority of a Needs Area?
* Sewer additional Needs Areas if we get approved for additional sewer disposal capacity?
* Create a Needs Area and include "doing nothing" as an option for that Needs Area?

If our future actions deviate from the report's recommendations significantly, do we just file paperwork or is there another (expensive) process we must go through?

Residents of Acton have been assured that the report is just a "blueprint" and "nothing is cast in stone." Yet at the public meeting, you indicated that changes to the report would not be trivial. You also heard some panelists tell the people present not to worry about the specifics. So I just want to make sure that many of the specifics in the report are still subject to discussion and change. (Not that the report itself would change, but that the town would be free to deviate from the report, based on further study and analysis.)

Otherwise, if that is not the case, then the report approval should be delayed so the supporting evidence that the report is based on can be made much more transparent so that people directly affected can challenge the findings. There is very little specific documentation on costs and environmental need and because of the length and technical nature of much of the report, I doubt very few people have read it. Yet we have been told repeatedly

not to worry because this is just a blueprint.

If, however, the report really is just a blueprint, and we can make substantial deviations from the recommendations contained in it, then this is also a moot point.

Finally, if a future Acton Town Meeting votes not to fund something in the report, is that fine with your office, or could that require an additional filing, cause a lengthy delay, or require us to submit a new report? (Residents have been assured that all future actions and money expenditures must be approved by Town Meeting, but would the town face a penalty of any kind if it failed to approve a course of action contained in the report?)

Thanks for your time and thanks for your work on this important issue.

Allen Nitschelm
9 Marian Rd., Acton.
(978) 266-2456.
Email Allen@thehomesteader.com

AC

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Regional Office, 627 Main Street, Worcester, MA 01608

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

STEPHEN R. PRITCHARD
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

August 15, 2006

Secretary Stephen R. Pritchard
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

RECEIVED
AUG 18 2006
MEPA

Attention: MEPA Unit – Anne Canaday

Re: Comprehensive Water Resource Management Plan (CWRMP)
Acton
EOEA # 13828

Dear Secretary Pritchard,

The Department of Environmental Protection (the Department) Central Regional Office has reviewed the Environmental Notification Form and Phase 2 Report for the Comprehensive Water Resources Management Plan (CWRMP) for the Town of Acton.

The Department has no comments beyond those submitted to MEPA on July 23, 2004, during the Phase 1 assessment of Acton's proposed CWRMP.

MassDEP appreciates the opportunity to comment on the Plan. If you have any questions, please do not hesitate to contact me at (508) 792-7650 *2802.

Sincerely,

Paul Anderson
Section Chief, Water Supply and Municipal Services

cc: Martin Suuberg, Regional Director, CERO
Commissioner's Office, MassDEP, Boston

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Regional Office, 627 Main Street, Worcester, MA 01608

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

AC

RECEIVED
AUG 2 2004
MEPA

July 23, 2004

Secretary Ellen Roy Herzfelder
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Attention: MEPA Unit –Ann Canaday

Re: Draft Environmental Impact Report (DEIR)
Comprehensive Water Resources and Wastewater Management Plan
Acton
EOEA # 11781

Dear Secretary Herzfelder,

The Department of Environmental Protection (the Department) Central Regional Office has reviewed the Draft Environmental Impact Report (DEIR) submitted for the Comprehensive Water Resources and Wastewater Management Plan for Acton.

The Department offers the following comments:

Wastewater
In Chapter 6, Sections 6.6.1 and 6.6.2, it should be noted that there are several facilities that are between 10,000 and 15,000 gallons per day and in a Zone II or an Interim Wellhead Protection Area (IWPA) that will be required to obtain a ground water discharge permit and probably require upgrading. Those facilities are Dover Heights, Strawberry Hill, and Woodvale. As the town proceeds to consider alternative solutions for the identified needs areas, consideration should be given to whether these facilities should remain as individual treatment and disposal systems or should be tied in to a facility serving a larger area.

The Douglas / Gates School Complex, if operated at full occupancy would meet the criteria for Table 6-11. The design flow for these schools (on one lot) should be added together and included.

When the planning effort proceeds to screen potential ground water discharge sites, the town and the consultants should review the potential sites with the Department and develop detailed scopes of work for any hydrogeological investigations prior to the initiation of the fieldwork.

The Department appreciates the opportunity to comment on the proposed project. If you have any questions regarding these comments, please do not hesitate to contact me at (508) 792-7650 *2802.

Sincerely,

Paul Anderson
Section Chief, Water Supply and Municipal Services

cc: Martin Suuberg, Regional Director, CERO
Commissioner's Office, DEP, Boston

#13828

AC

Water Supply District of Acton

693 MASSACHUSETTS AVENUE
P.O. BOX 953
ACTON, MASSACHUSETTS 01720-0953

JAMES L. DEMING
DISTRICT MANAGER

TELEPHONE (978) 263-9107
FAX (978) 264-0148

July 7, 2006

The Secretary of Environmental Affairs
100 Cambridge Street
Suite 900
Boston, Ma.

ATTN: MEPA Office

RE: Town of Acton, Comprehensive Water Resource Management Plan

To whom it may concern;

I am writing in response to the Public Notice of the ENF for the above referenced project. The Comprehensive Water Resource Management Plan contains a variety of "potential" solutions to the Town of Acton's wastewater disposal needs. As I understand it, the only project that is currently being "recommended" is the addition of some sanitary sewer collection lines in West Acton. The Acton Water District does not see any reason to require an Environmental Impact Report for this particular project.

However, also contained within this same report are a variety of "potential solutions" to the Town's wastewater needs in other areas. Of chief concern to the Acton Water District are those areas where disposal of highly treated wastewater may be considered within our Zone IIs. Obviously, if and when, this potential course of action is considered, the Acton Water District would recommend that you vigorously pursue the need of an Environmental Impact Report and that special consideration be given to any, and all, issues surrounding the possible contamination of our existing public water supply.

If a site visit, or consultation session, for these phases of the Comprehensive Water Resource Management Plan are scheduled, we would request that we be notified.

Regards;

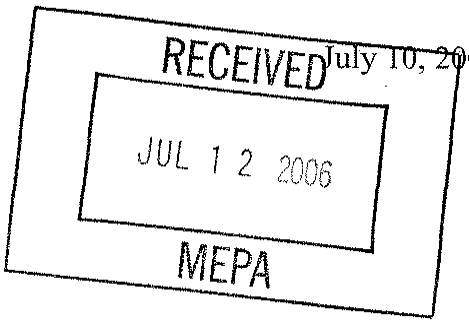
James L. Deming
Manager, Acton Water District

Cc Robert Rafferty, Woodard and Curran
Doug Halley, Town of Acton

AC
13828

Secretary of Environmental Affairs
100 Cambridge
Suite 900
Boston, MA 02114

July 10, 2006



ATTN: MEPA OFFICE

Re: Acton Water Resources Plan Comment

In 2003 the DEP created a Zone II surrounding the Maynard Rockland Street wells. This includes portions of South Acton.

When the Acton Water Resources Plan was developed the existence of the Zone II area in South Acton was not known by Acton Town officials nor the Citizens Advisory Committee that created the Plan. While Maynard did notify Acton as required by DEP in its letter (attached) the impact of a Zone II classification on homeowners (bedroom restriction) apparently was not understood. Over 100 South Acton homes are affected by the Zone II restriction as the area is largely composed of 20,000 sq ft lots or less.

Priorities for extension of the Sewer District detailed in the Water Resources Plan were set without regard to the South Acton Zone II designation. None of the higher priorities are in a Zone II area.

I feel that had the designation of the South Acton Zone II been known, this area would have been placed first in the priority listing. I believe that the area should be designated high priority and #1 on the list.

Note: When the South Acton Sewer Plant was constructed the sewer line ended at Sylvia Street and Main St. (Route 27). Zone II extends into South Acton about 700 feet beyond Sylvia Street towards Acton center. Most of the affected properties could be addressed by an extension of the sewer line down Main Street toward Maynard.

Regards,

Paul Gaboury
978-618-1729

COMMONWEALTH OF
EXECUTIVE OFFICE O
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

EDWARD P. KUNCE
Acting Commissioner

MAY 23 2003

May 20, 2003

Walter Sokolowski
Maynard DPW, Water Division
195 Main Street
Maynard, MA 01754

RE: **Maynard**—Public Water Supply—
Zone II Delineation

PWS-ID # 2174000

Dear Mr. Sokolowski:

The Department of Environmental Protection (DEP), Drinking Water Program, has reviewed a United States Geological Survey (USGS) 2003 report titled "Delineation of Water Sources for Public-Supply Wells in Three Fractured-Bedrock Aquifer Systems in Massachusetts" (Water-Resources Investigations Report (WRIR) #02-4290. The USGS report presents the results of a data collection and numerical computer modeling effort to simulate three different bedrock aquifers in Massachusetts. One of the study areas included the bedrock aquifer where the Maynard DPW public supply bedrock wells are located. The DEP completed a Zone II map dated February 2003 for these bedrock wells based upon a numerical computer simulation of Zone II conditions completed by the USGS. Included in the Zone II delineation are Rock Wells No. 2, 3, and 5 (source ID #2174000-05G, -06G, and –07G, respectively).

The aquifer characteristics used in the USGS model were determined based upon the results of long term pumping tests that were conducted on all three sources in July 2000. The Zone II simulation used steady state conditions using Zone II pumping rates and average recharge rates to establish initial groundwater elevations. A transient simulation was then run for a time of 180 days at the same Zone II pumping rates with no recharge. The Zone II delineation was based upon the capture zone that would develop at the end of the 180-day no recharge period.

DEP hereby **approves** the February 2003 Zone II delineation. The Department recommends that Maynard DPW, Water Division work toward the incorporation of the Zone II area into the Town of Maynard's Water Supply Protection District. DEP also recommends that Maynard DPW, Water Division work with the Towns of Acton and Stow to implement zoning and non-zoning controls that meet the requirements of 310 CMR 22.21(2) to protect those portions of the Zone II that are in Acton and Stow.

DEP hereby establishes **approved pumping rates** and **approved daily volumes** for 05G, 06G, and 07G as stated below. Establishment of these rates does not authorize you to exceed the basin-wide average daily withdrawal volume for which you are registered and permitted under the Water Management Act (Massachusetts General Laws, ch. 21G).

Well Name	Source ID No.	Pumping Rate (gallons per minute)	Daily Volume (million gallons per day)
Rock Well No. 2	2174000-05G	322	0.464
Rock Well No. 3	2174000-06G	199	0.287
Rock Well No. 5	2174000-07G	263	0.379

Within the next year the DEP's Source Water Assessment Program (SWAP) will complete a windshield survey of the Zone II area to map and identify potential sources of contamination.

If you have any questions regarding this letter, please contact Joe Cerutti at (617) 292-5859.

Sincerely,

David Y. Terry
Program Director
DEP, Drinking Water Program

cc: Bruce Bouck, DEP, Drinking Water, Boston
Duane Levangie, DEP, Water Management Act, Boston
Eugene Brunelle, DEP, Drinking Water, CERO
Barbara Kickham, Drinking Water, CERO
Josephine Yemoh-Ndi, Drinking Water, CERO
Planning Board, 195 Main Street, Maynard, MA 01754
Board of Health, 195 Main Street, Maynard, MA 01754

Commonwealth of Massachusetts

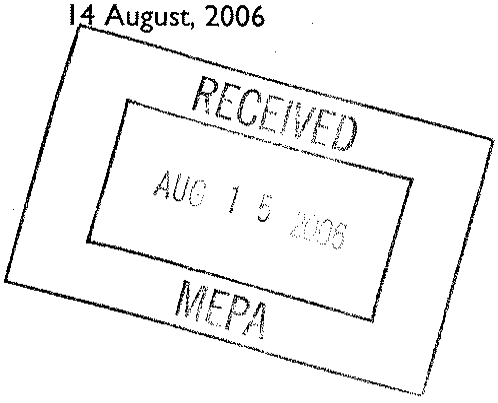
RIVERWAYS PROGRAM

Building Partnerships, Protecting Rivers

Joan C. Kimball, *Riverways Director*

AC

14 August, 2006



Stephen R. Pritchard, Secretary
Executive Office of Environmental Affairs
Attn: MEPA Unit
EOEA #13828; MEPA Analyst Anne Canaday
100 Cambridge Street, Suite 900
Boston, MA 02114-2524

EOEA #13828 - Acton Comprehensive Water Resource Management Plan

Dear Secretary Pritchard,

The Riverways Program staff have reviewed the Environmental Impact Report for the second phase of the Comprehensive Water Resources Management Plan for Acton. This filing provided great detail of the process employed and data used in developing the CWRMP. This level of detail helped in the review and assessment of the proposed recommended plan. Based on the information provided, Riverways staff would like to offer the following comments and observations.

We are pleased to see the Town investigating the many options available and striving to 'Keep Water Local'. The decision to limit sewer expansion to only those parcels with high needs and not expanding the treatment plant needlessly is to be commended. We also commend the Town for the level of public participation achieved and their approach to determining management districts. We agree with the Plan's recommendation that the use of the alternative systems and Wastewater Management Districts with be adequate to protect public health and the environment in for most of the community. We hope the Town might consider ways to encourage 'pilot' installations of alternatives systems with an emphasis on systems capable of advanced treatment (such as nutrient removal or disinfection) or designed to work in challenging areas (high groundwater, small lots, etc.).

The advantages to piloting alternative on-site methods would be bolstered by further refining the management districts detailed in the ENF. By determining sensitive receptors and defining areas of influence to these sensitive resources, the need for specific, enhanced on-site treatment options could be mapped. The community might consider an overlay or other methodology that would elaborate on treatment goals for new or rehabilitated on-site systems. For example, a system near a eutrophied waterway might use an alternative system designed to provide a greater degree of nutrient removal than conventional on-site systems. A sub-basin experiencing a water deficit might require, or at least encourage, shallow dousing leech systems to reduce the need for outdoor lawn watering. As a first step, to better analyze environmental needs in a sub-basin, we would like to recommend the maps of the management districts be overlain with a data layers containing sensitive receptors, known water quality concerns and losing/water deficit sub watersheds and those with low flow issues. This map would provide a blue print for possible sub districts ripe for additional management requirements and/or treatment goals. In general we would like to see more investigation into the possible use and appropriateness of alternative systems. We believe many of the areas labeled as requiring mounded

systems may be better served by alternative systems which would not require the undesirable mound systems while providing additional environmental benefits.

Information on possible water quality and flow impacts associated with the different wastewater management options are significant data needs not adequately covered in the ENF. These potential impacts are a crucial component in the assessment of short and long term 'costs' of a given option. It is imperative, given the amount of public investment through SRF and other funding sources, that environmental costs be a factor in assessing alternatives and selecting those options which best serve the needs of the community while avoiding or at least minimizing environmental impact.

As an example, Riverways staff provided comments on the initial filing for the CWRMP, (EOEA # 11781). In the comment letter a suggestion was made to determine the hydrologic budgets within each of the subwatersheds as this information was a crucial component of a CWRMP. By using data on withdrawals volumes and locations, wastewater discharge types (surface or groundwater) and volumes, estimated runoff volumes and recharge, (from landuse) plus information about water resources and their flow regimes in the subwatershed, the net gain and loss in a discreet subwatershed could be roughly calculated and used to inform the alternatives analysis.

For example, the preferred alternative suggests maximizing flows to the underutilized existing small, private decentralized systems provides a sound treatment option. Without looking at hydrology of the sub-basin(s) involved, it can't be known if sending additional flows to these private systems may result in negative impacts to recharge (is the discharge from these facilities to surface water or groundwater?), stream flow regimes, wetland viability or vernal pools. Might this option result in increased concentration of effluent result in nutrient loading to a stream segment or pond? If an option has the potential to increase nutrient loading to a waterway or result in the transfer of water from one subwatershed to another these factors need to be noted, quantified and considered in the decision making process. Without answers to these and other environmental impact questions the preferred alternative lacks the supporting environmental information needed for a truly informed decision.

We would also like to recommend costs be further parsed into costs per household to avoid misinterpretation plus more detail be provided on how costs were calculated. The ENF states the sewer expansion to the Spencer/Tuttle/Flint area will cost $8-9 million while the Level 4 Wastewater Management District costs are listed as higher- at $12-13.5 million- over 20 years. The costs associated with these two alternatives might elicit different responses depending on whether cost per household were provided, (it is likely the Wastewater Management District will cover far more households than the sewer extensions thus resulting a significantly lower cost per household). This example highlights the need to show how these costs were determined and if environmental costs (or benefits) were part of the calculation.

Riverways staff appreciate this opportunity to comment on this project. Please contact our office if we can be of any assistance.

Kind regards,

Cindy Delpapa

Cindy Delpapa, Stream Ecologist
Riverways Program

251 Causeway Street • Suite 400 • Boston, Massachusetts 02114 • www.massriverways.org • (617) 626-1540
Riverways Program, A Division of the Department of Fish and Game David M. Peters, *Commissioner*

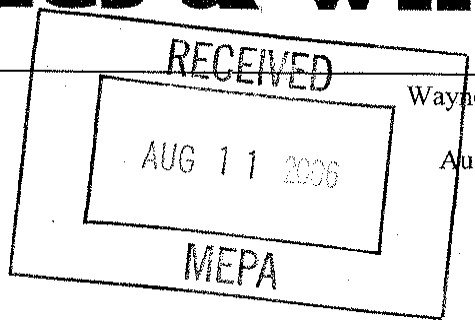
Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

AC



August 8, 2006

Stephen R. Pritchard, Secretary
Executive Office of Environmental Affairs
Attention: MEPA Office
Anne Canaday, EOEA # 13828
100 Cambridge St.
Boston, Massachusetts 02114

Project Name:	*Acton Comprehensive Water Resources Management Plan*
Proponent:	*Town of Acton*
Location:	*Town-wide*
Document Reviewed:	*Environmental Notification Form*
NHESP Tracking No:	*06-20289*

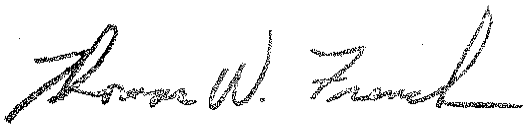
Dear Secretary Pritchard:

The Natural Heritage & Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife has reviewed the Environmental Notification Form (ENF) and "Priority Status of Needs Planning Areas" and "Recommended Solutions for Needs Planning Areas" figures (dated 2/06). At this time, the NHESP would like to offer the following comments in regard to state-listed rare species and their habitats.

Several of the Needs Planning Areas are located within areas mapped as Priority Habitat for state-listed rare species as indicated in the *11th Edition of the Natural Heritage Atlas*. Recent revisions to the Massachusetts Endangered Species Act Regulations (MESA) (321 CMR 10.00) that became effective July 1, 2005, require that proposed activities located in Priority Habitat file a "MESA Project Review Checklist" directly with the NHESP, independent of providing the NHESP a copy of a Notice of Intent (NOI). The MESA is administered by the NHESP of the MA Division of Fisheries & Wildlife, and prohibits the "take" of state-listed species, which includes actions that "...harm...kill...collect...disrupt nesting, breeding, feeding or migratory activity, and *in reference to plants*, means to collect, pick, kill, transplant, cut or process. Disruption of nesting, breeding, feeding, or migratory activity may result from, but is not limited to, the modification, degradation, or destruction of habitat" of state-listed species (321 CMR 10.02). Attached is a general fact sheet regarding the MESA revisions. Please note that some activities are exempt from compliance with MESA (321 CMR 10.14).

At this early stage, the NHESP does not have enough information to evaluate state-listed rare species impacts; however we note that consultations with the NHESP may expedite the regulatory review process. Further details regarding the MESA revisions, filing requirements, lists of rare species by town, and rare species fact sheets are available on the NHESP website, www.nhesp.org. Additionally, the NHESP has a process for requesting rare species information about properties of interest (321 CMR 10.17). If you have questions about this letter please contact Rebecca Skowron, Environmental Review Assistant, at (508) 792-7270 ext. 148. We appreciate the opportunity to comment on this project.

Sincerely,



Thomas W. French, Ph.D.
Assistant Director

Cc: Acton Conservation Commission
Acton Planning Department
Acton Board of Selectmen
Acton Board of Health
Bob Rafferty, Woodard & Curran
DEP Northeast Regional Office, Wetlands Program

MASSACHUSETTS ENDANGERED SPECIES ACT

REGULATORY CHANGES

Natural Heritage & Endangered Species Program

Effective July 1, 2005

The Massachusetts Endangered Species Act (MESA; MGL c. 131 A) and its implementing regulations (321 CMR 10.00) establish procedures for the listing and protection of rare plants and animals. As such, MESA plays an important role in maintaining biological diversity, preventing species extinctions, and contributing to rare species recovery in Massachusetts. The MESA regulations were recently revised to clarify project review filing requirements for projects or activities that are located within a Priority Habitat of Rare Species ("Priority Habitat"), provide clear review timelines, and establish an appeal process for agency actions. These regulatory changes took effect on July 1, 2005 and are linked to the establishment of filing fees to support MESA implementation. The MESA regulatory changes reflect a two-year process of agency consideration with input from the public and key stakeholders. These regulatory changes achieve the goal of providing a clearer, more user-friendly process for project proponents without weakening protections for state-listed rare species and their habitats.

SUMMARY OF KEY CHANGES

- Applicants must file with NHESP for all Projects or Activities within Priority Habitat of Rare Species (for exemptions see 321 CMR 10.14)
- This filing is required whether or not a Notice of Intent is filed with the local Conservation Commission
- The NHESP must respond following timelines specified in the regulations. Failure to respond in time will result in automatic approval.
- An appeal process for agency decisions is established

WHO MUST FILE?

Project proponents *must file* directly with the Natural Heritage & Endangered Species Program (NHESP) for *all nonexempt projects or activities where the proposed project is located within a Priority Habitat.* A listing of filing exemptions for projects located within a Priority Habitat is available in the regulations at 321 CMR 10.14 and is summarized at www.nhesp.org. *The requirement to file under MESA for a project located within a Priority Habitat is independent of the requirement to submit a copy of a required Notice of Intent ("NOI") to the NHESP* for a project located within an Estimated Habitat for Rare Wildlife under the MA Wetlands Protection Act Regulations. The revisions to the MESA regulations are not related to Estimated Habitats and have no effect on existing NHESP review procedures under the MA Wetlands Protection Act. *A MESA filing is required even if no work is proposed within Wetland Resource Area or Buffer Zone.*

FILING AN NOI? STREAMLINE YOUR MESA REVIEW!

For a streamlined review of projects located within both an *Estimated Habitat* and a *Priority Habitat*, NHESP recommends that the MESA checklist, fee, and required supporting information be submitted to the NHESP at the same time a copy of the project NOI is submitted.

PROJECT IN PRIORITY HABITAT?

Avoid costly delays, last minute project redesign, and the possibility of criminal and civil penalties by consulting with the NHESP early regarding projects.

(updated 3/3/06)

How Do I File?

A filing requirements checklist is provided at www.nhesp.org ("Regulatory Review" Tab). The fee schedule that supports MESA implementation is provided at 801 CMR 4.00 and at www.nhesp.org.

What is Priority Habitat?

Priority Habitat is the mapped geographical extent of known habitat for all state-listed rare species, both plants and animals. Habitat alteration within Priority Habitats may result in a "take" of a state-listed species, and is subject to regulatory review by the Natural Heritage & Endangered Species Program. Priority Habitat maps are used for determining whether or not a proposed project must be reviewed by the NHESP for MESA compliance. Current Priority Habitat maps are available through an interactive web viewer at www.mass.gov/dfwele/dfw/nhesp/nhregmap.htmonline. The Priority Habitat datalayer is also available for download and viewing with appropriate software (www.mass.gov/mgis/prihab.htm). Maps are also available in the Massachusetts Natural Heritage Atlas (11th edition) (Please note: some changes to Priority Habitat boundaries made between July 2003 and June 2005 are not shown in the 2003 paper Atlas).

What should I expect during the MESA review process?

Within 30 days of receiving a filing the NHESP will provide a response letter indicating whether or not the submission is complete. If the submission is complete, the NHESP will provide a determination letter within 60 days of the date of posting of the first letter. In this letter, the NHESP will determine whether or not a project, as currently proposed, will result in a "take" of state-listed rare species (for more information on "take" see 321 CMR 10.02 and www.nhesp.org). If a project is determined to result in a take then it may be possible to redesign the project to avoid a take. If such revisions are not possible, then projects resulting in a take may only be permitted if they qualify for a Conservation & Management Permit (321 CMR 10.23). NHESP regulatory review staff is available to consult with project proponents about designing projects to avoid a take or to qualify for a Conservation & Management Permit.

Recommendations to Reduce Project Review Delays

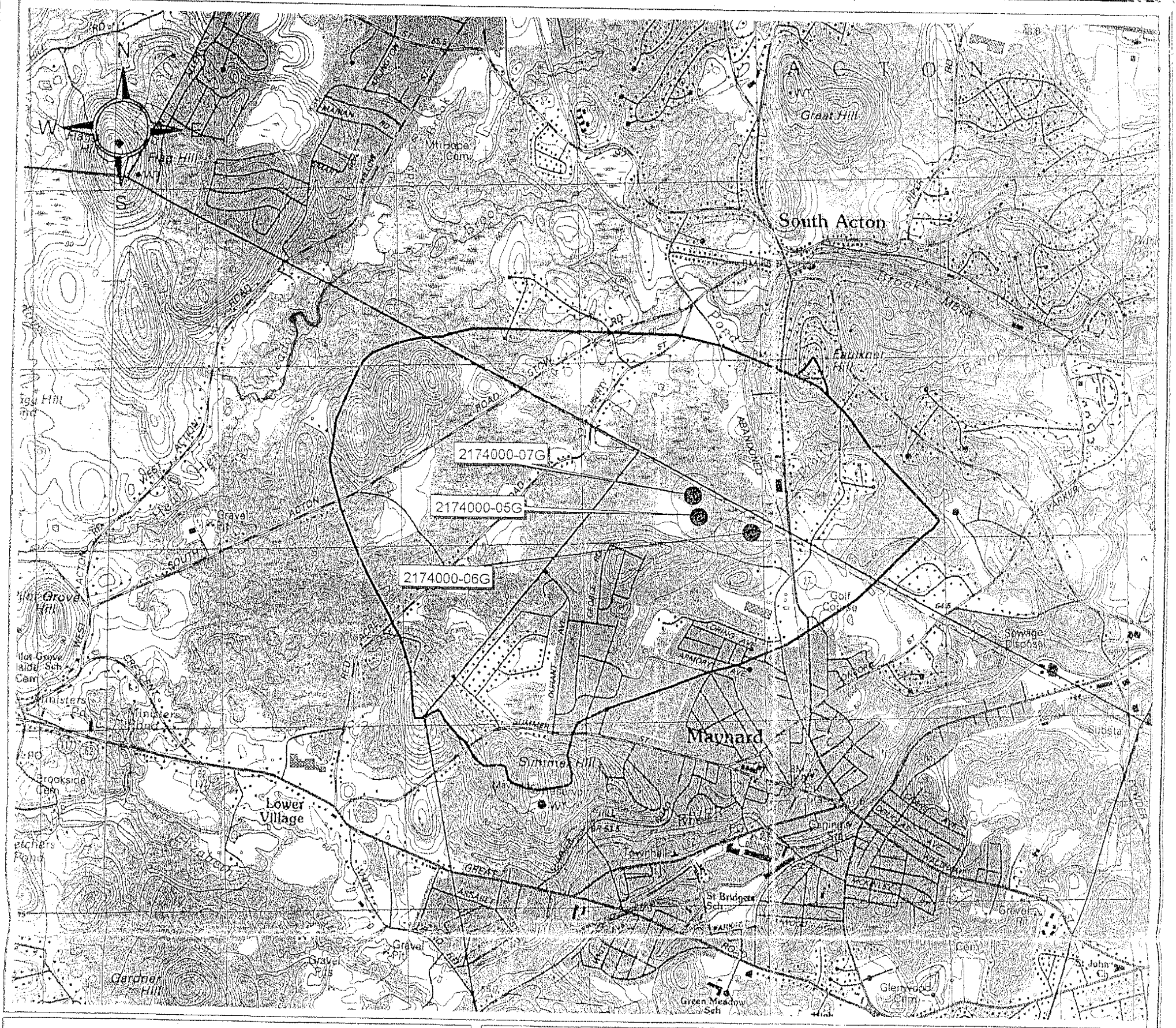
- Design projects to avoid a "take." This will avoid time delays associated with NHESP review of project revisions.
- Submit an Information Request form. The NHESP will respond within 30 days with a list of state-listed species associated with a project site. This may facilitate project planning to avoid and minimize rare species impacts.
- For larger projects, consider a pre-filing consultation with NHESP staff. Although the applicant's project team should include qualified experts who take the lead in project design to meet MESA standards, the NHESP will offer pre-filing consultations, as time allows.
- Submit a complete permit application. Otherwise the NHESP may be forced to reject the filing, triggering a required resubmission and additional 30-day review period.

Where can I get more information?

See www.nhesp.org "Regulatory Review" tab, or contact review staff at (508) 792-7270 ext. 154.

Project in Priority Habitat?

Avoid costly delays, last minute project redesign, and the possibility of criminal and civil penalties by consulting with the NHESP early regarding projects.



LEGEND

- Zone I Boundary
- Zone II Boundary
- Zone III Boundary
- Public Water Supply Wells

Scale 1:25000

1500 0 1500 3000 4500 Feet

Topographic Contour Interval = 3 Meters

Municipality	Maynard
PWS Identification #	2174000
Name of Water Supplies	Rock Well #2 (05G) Rock Well #3 (06G) Rock Well #5 (07G)
Water Purveyor	Maynard DPW Water District
Source Identification	2174000-05G 2174000-06G 2174000-07G
Project Proponant	Massachusetts DEP
Title of Study / Purpose of Delineation	SWAP Zone II
USGS Quadrangle Name	Maynard, Mass.
Consultant	None
Date of Study Submittal	February 2003
Latitude / Longitude of Sources	2174000-05G: 42.44719 / 71.46007 2174000-06G: 42.44645 / 71.45653 2174000-07G: 42.44522 / 71.46046

Signatures: Walter Sokolowski Date: 25 MAR 03

Water Purveyor:

Consultant:

Project Proponant:

Regional Water Supply Chief: MAY 23 2003

ZONE I / ZONE II / ZONE III DELINEATION

MAYNARD DPW WATER DISTRICT
ROCK WELL #2, 2174000-05G; ROCK WELL #3, 2174000-06G; ROCK WELL #5, 2174000-0
MAYNARD, MASSACHUSETTS

Exhibit 1
Page 3 of 3