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MEETING DATE: August 25, 2005

REFERENCE: Acton CWRMP
CAC Meeting

ATTENDEES: CAC:
Ann Chang – CAC / SAC
Nancy Tavernier – CAC / SAC
Art Gagne – CAC / SAC
Jane Ceraso – CAC / Acton Water District
Chris Schaffner – CAC / Planning Board
Pat Cumings – CAC
Brent Reagor – Health Dept
Bob Rafferty – Woodard & Curran

DISTRIBUTION: Attendees
Doug Halley – Health Director
Dan Garson – W&C
Helen Gordon – W&C
W&C File
Posting on Town website

Submitted by: Robert Rafferty, P.E.

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Woodard & Curran, Inc. Andover Massachusetts, Attn: Bob Rafferty. brafferty@woodardcurran.com

ATTACHED ITEMS

Agenda
Matrix of prioritized solutions

AGENDA ITEMS

Welcome and Introductions:

Brent Reager led the introductions and presented the goals of the meeting. He discussed the status of the CWRMP and hydrogeologic investigation, which is complete pending completion of the final report. This meeting focuses on the findings of the hydrogeological investigation and the prioritization of solutions. The CWRMP project team (consultants and town staff) met on August 29, 2005 to discuss the potential technologies suitable for wastewater collection, treatment, and disposal based on the capacity for offsite disposal in each disposal area. The evaluation will continue once the CAC prioritizes solutions.

Hydrogeological Investigation:

Bob Rafferty presented a summary of the hydrogeologic investigation findings. The following Summary Table presents the hydraulic loading rate, overall hydraulic capacity, and resultant mounded groundwater height above normal (sampled) groundwater level for each proposed disposal site. The numbers are rounded for ease of readability. The full hydrogeological report will discuss the range of loading rates, as well as considerations for variations in the soil hydraulic conductivity.

Site	Loading Rate (gpd / sq ft)	Capacity (gpd)	Groundwater mound height (ft)	Loading Rate (gpd / sq ft)	Capacity (gpd)	Groundwater mound height (ft)
Quarry Road	0.5	48,000	3 – 5	1.0	96,000	5 – 9
Wetherbee	0.5	125,000	2.3	1.5	370,000	8
Adams St	0.5	84,000	3 – 5	1.5	250,000	8
High St	0.5	84,000	0.5	1.5	250,000	1.1

Potential Disposal Sites:

The CAC discussed each site in more detail: (Q = Question from CAC; A = Answer from Project Team; C = Comment from CAC; R = Response from Project Team)

Quarry Road, North Acton

This site was identified as a potential offsite solution for Needs Areas 1 and 2. The site is located at the Highway Department storage area, and is the location of decommissioned septage lagoons.

- C: It does not appear to be sufficient capacity to warrant putting pipes in the ground from Needs Area 2 to this site. Are there other alternatives for Needs Areas 1 and 2?
- R: Although disposal locations are limited, Needs Area 2 has many private treatment plants that are operating adequately, so a public/private solution is a possibility. Also, new construction may provide opportunities. For example, Spring Hill apartments will be building a treatment facility. The Woodlands at Laurel Hills, partially located in Westford, is another potential partnership. There may be an opportunity at the Nagog Woods treatment facility, but because they have challenges with the disposal field this option was ruled out in earlier assessments. However, since Nagog and Woodlands are in close proximity some combination of Nagog Woods residents and Woodlands may provide excess capacity at either facility. These alternatives have not been investigated further by the project team since Spring Hill and Woodlands are recent developments.

Needs Area 1 has a recent residential development with approximately 90 5-bedroom homes, all on individual onsite systems. Extensive fill was needed to raise the ground surface. A local private treatment facility has excess capacity and has experienced operational problems, partially because of the low flows.

C: A cluster solution in Needs Area 1 could fit with Planning Board thoughts on North Acton Village.

Q: Have public/private partnerships been used elsewhere? What are the drawbacks to these and cluster systems?

A: Mashpee Commons is a good example. In Western Massachusetts, several communities entered into agreements with the local paper mill facilities to treat domestic wastewater, though not without complication when the mill downsized or shut down. DEP has requirements for small cluster system funding, requiring that owners hold funds in escrow for maintenance and replacement of the system.

Weatherbee Street

This area is a potential solution to Needs Areas 3 and 4. The site is farmed by the state as part of a program affiliated with MCI Concord. The site borders Route 2 and Wetherbee Street.

Q: This parcel has a legislated conservation restriction on its deed. Town Counsel is currently evaluating a similar situation concerning a septic system on conservation land, though this may be a different legal issue. Does a disposal facility constitute a change in use?

A: The construction of a disposal field would be subsurface, which would allow continued use as agricultural land. Town Counsel should review the legal aspects.

Q: Which part is conservation land, and what structures would be above ground.

A: The farmed portion is conservation land. A treatment facility would be located nearby. Site layout will be conducted as part of the technology evaluation.

C: This is not only a legal issue; perception is important since the field is a local landmark.

C: The Town should check with legal counsel to determine the best course of action, possibly go to the legislature to remove the restriction or amend the conservation restriction if needed.

Adams Street

This parcel is a potential solution to provide increased disposal capacity at the Adams Street treatment facility. The site is comprised of a generally level wooded lot with the boundary defined by Adams Street, Maynard, the Acton WWTF, and steep slopes toward the Assabet River. To maximize the area for modeling purposes, this site was divided into two distinct areas separated by the vernal pool. The modeling effort is somewhat less precise than other sites because of the potential for a perched water table and the slope, which impact hydraulic loading. Another consideration is the elevated groundwater levels at the Maynard WWTF, downstream of the potential disposal site, and would be part of any further investigatory effort.

C: Archeological issues should also be considered because of the finds at the WWTF site.

R: Agreed, this would have to be considered if this site is considered a viable alternative.

Q: The site is divided into two disposal areas. Is this feasible?

A: The follow up phase, if this site is selected, would be to refine the disposal area considering the hydrogeology, costs, and other issues. The capacity ranges given in the introductions are preliminary assuming the soil characteristics are accurate and each site can be used to its maximum extent, which is unlikely in this case because of the vernal pool and other

challenges. As a practical consideration, the challenges in the introduction would all have to be addressed.

High Street

This site is a potential solution to expansion of the existing WWTF to serve Needs Areas adjacent to the sewer system. The area is located on the same parcel as the High Street well field and the Assabet wells. The travel time from the disposal area to the wells is part of siting the location of the field. The state is currently reviewing proposed regulations for treated wastewater effluent reuse, which may reduce the travel time restriction from 2 years to 1 year. The hydrogeologic evaluation was based on previous reports and other subsurface studies. No borings or test pits were performed for this project at this site.

- C: The WR Grace plume should be a consideration in any modeling and planning.
- R: Yes, if this alternative is selected for further evaluation, the modeling would factor the impact on the plume, travel time to the wells, and the delineation of the Zone II, which makes the next phase of investigation the most costly of the four sites.
- Q: Acton has not explored the potential for other discharge options such as partnering with the Maynard WWTF. Maynard is faced with meeting strict discharge limits and may be willing to consider assistance from Acton in exchange for capacity.
- R: Town staff will follow up on this suggestion. In addition, the Powdermill Plaza WWTF is continuing with plans to connect to the Acton sewer system, which may make its permitted discharge permit available for transfer to the Town. The Town is investigating whether the permitted discharge loadings to the Assabet River are available for use by the Town.
- Q: What is the total expected wastewater flow from the Needs Areas adjacent to the sewer system?
- A: The Health Department has collected almost all the water use data needed to refine the wastewater estimates for the west side of the railroad right of way. Once the data is collected, the project team will refine the analysis.
- Q: Does the potential inclusion of Yankee Village change any plans to serve other Needs Areas?
- A: Yankee Village has not moved forward with a formal application to connect. The Board of Selectmen has determined that there is no legal mechanism to defer payment of the legal fee. The privilege fee must be paid up front. The Village Condominium Association is waiting for more data to complete their evaluation.
- C: The payment of the privilege fee may be a problem if the sewer system is expanded. If everyone had to pay the fee up front, it would be difficult to find support for extending the sewer. The Town should investigate a home rule petition to allow payment of the privilege fee over time, similar to the betterment fees.

Ranking of Solutions:

The CAC worked through the attached matrix, assigning priorities for each solution to each Needs Area. Specific notes are:

One option is creation of Wastewater Management Districts. These have been discussed at previous CAC meetings, but the structure and implementation of districts can follow a wide range of possibilities. For this discussion, the consideration of districts as a solution should be considered as a general idea of increased monitoring and control on onsite systems.

The CAC considered some solutions as NA (Not Applicable). Generally, connection to the existing collection system for Needs Areas north of Route 2, or construction of new collection and treatment system for Needs Areas adjacent to the existing collection system are considered not feasible.

C: It would be easier and more effective to institute districts as part of new developments instead of trying to regulate existing systems.

R: The town has required elements of districts for new developments. The Health Department already has a basic program in place that requires regular pumping of all septic systems.

Needs Area 1 (North Acton Village):

C: Wastewater Management District or cluster (to private system if available) makes the most sense because the Quarry Road site has too many drawbacks – gravel removed, access, distance.

Needs Area 2 (Nagog Woods etc):

C: Cluster solution should include a potential tie-in to Woodlands or Nagog Woods.

Needs Area 3 (East Acton Village):

C: East Acton Village plan should fit well with construction of a new system.

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.

Needs Area 4 (Robbins Park):

C: This area could be combined with Needs Area 3 and connected to the Wetherbee Street alternative.

Needs Area 5 (Brucewood Estates):

C: The Auto Auction site was considered when the existing system was being planned, but was found to not have the capacity needed for the Middle Fort Pond Brook system.

C: The other potential disposal site for a satellite (or cluster) system was near the School Street well fields, which the CAC recommended to remove from the hydrogeological investigation program.

Needs Area 6 (Brookside):

This area has a small private WWTF (12,000 – 13,000 gpd) that is approximately 20 years old. The Needs Area has approximately 15 houses located across the Middle Fort Pond Brook from the sewer system.

C: A cluster (maybe to private system) solution seems to fit this situation, or set up a district.

Needs Area 7:

C: Powdermill Plaza is in the process of connecting to the existing system.

Needs Area 8 (Maynard border):

C: This is in the original sewer district. Solutions should be to connect to the Acton or Maynard sewer.

Needs Area 9 (Heath Hen Meadow etc):

C: Could connect to existing sewers if the main pipe was in Central Street but would be a significant distance.

Needs Area 10 (Spencer/Tuttle/Flint):

C: Needs should be weighed against West Acton Center and Indian Village if the Adams Street WWTF disposal capacity limits choices.

Needs Area 11 (Nash/Downey):

C: Dover Heights may be a concern because of the large amount of flow. There may be some good soils on smaller lots suitable for cluster solutions.

Needs Area 12 (West Acton Center):

C: West Acton includes the schools.

Needs Area 13 (Indian Village):

C: Indian Village appears to be too large and beyond the reach of a sewer system extension, especially if Spencer/Tuttle/Flint is considered a higher priority.

Needs Area 14 (Colonial Acres / Flagg Hill):

C: There are large systems in the area. A cluster or shared system may be possible, but most system problems could be corrected by constructing mounded systems.

Needs Area 15 (Acton Center / Town Hall):

C: Phase 3 of East Acton (Wetherbee) is a possibility.

NEXT STEPS FOR THE PROJECT TEAM

1. The Project Team is finalizing the hydrogeologic assessment. The report will be forwarded to CAC and DEP for comment prior to the next CAC meeting.
2. Flows from each Needs Area will be matched to the capacity potential of the CAC's recommended solutions.
3. Technological alternatives for solutions will be prepared.
4. The Environmental Notification Form (ENF) will be prepared for submittal to MEPA.

CONSENSUS ACTION ITEMS

- Follow up on recommendation to Board of Selectmen to provide means for time payment of the Privilege Fee, possibly through a home rule petition.
- Ask Town Counsel to review legality of a subsurface disposal field at Wetherbee Street.
- Contact Maynard to inquire about opportunities to collaborate on serving Needs Areas and meeting new stringent wastewater effluent discharge limits.

Town of Acton

ACTON WASTEWATER CITIZENS ADVISORY COMMITTEE

Comprehensive Water Resources Management Plan /

Environmental Impact Report

CWRMP/EIR

Thursday, August 25, 2005

7:00 PM

ACTON TOWN HALL, ROOM 204

Meeting Goals:

Prioritize Solutions for Needs Areas

Develop cohesive public outreach

Agenda:

- Welcome
- Introductions
- Regulatory update
- Prioritization discussions
- PR/Outreach planning
- Next Steps
- Evaluate the Meeting

Needs Areas / Solutions Matrix per CAC Recommendations (8/25/05)

Needs Area #	Description	Current Priority Status	Rank (1-4) with 1 being your first choice, etc...			
			Connect to Existing Sewers	Construct New WWTF/Sewers	Cluster/Neighborhood System	Wastewater Management District
1	North Acton Village Robbins Brook Marshall Crossing	Medium	NA	3	1	2
2	Nagog Woods Acorn Park North Acton Woods	Low	NA	2	1	NA
3	East Acton Village Route 2A	High	NA	1	2	3
4	Concord Road Flobbins Park	Medium	NA	1--EAST ACTON	3	2
5	Brucewood Estates	Medium	3 NA		2	1
6	Brookside Apts.	Low	2 NA		1	3
*7	Powdermill Plaza	High				
8	Maynard Border (Main St.)	Low	1 MAYNARD OR ACTON	NA	3	2
9	Heath Hen Meadow Liberty Street Stow Street	Low	3 NA		2	1
10	Spencer/Tuttle/Flint Nash/Downey	High	1 NA	NA		2
11	Dover Heights	Medium	1 NA		2	3
12	West Acton Center	High	1 NA		2	3
13	Indian Village	High	1	2	4	3
14	Colonial Acres Forest Glen	Medium	NA			
15	Flagg Hill Acton Center	Low	NA	2--EAST ACTON	3	1
* In process of connecting to MFPBS			NA = Not Applicable			

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MEETING DATE: July 14, 2005

REFERENCE: Acton CWRMP
CAC Meeting

ATTENDEES: CAC:
Ann Chang – CAC / SAC
Nancy Tavernier – CAC / SAC
Art Gagne – CAC / SAC
Chris Schaffner – CAC / Planning Board
Helen Probst – CAC
Eric Hilfer – ACES
Anne Ford – resident
Stuart Barne – resident
Victoria Beyer – Yankee Village Condo
Cathleen Kennedy – Yankee Village Condo
Allen A. Whitaker – Yankee Village Condo
Doug Halley – Health Director
Brent Reagor – Health Dept
Bob Rafferty – Woodard & Curran

DISTRIBUTION: Attendees
Dan Garson – W&C
Helen Gordon – W&C
W&C File
Posting on Town website

Submitted by: Robert Rafferty, P.E.

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Woodard & Curran, Inc. Andover Massachusetts, Attn: Bob Rafferty. brafferty@woodardcurran.com

ATTACHED ITEMS

Agenda

Memo re: Yankee Village situation dated 7/6/05

Memo re: Needs/Solutions Ranking Chart (Chart not included) dated 7/6/05

Draft press release

Memo to Town Manager from Health Director re: Yankee Village

AGENDA ITEMS

Welcome and Introductions:

Doug Halley led the introductions and presented the goals of the meeting. He discussed the recent fire at the Yankee Village (the Village) wastewater treatment facility (WWTF).

Yankee Village Condominiums:

The options include rebuilding the current WWTF or connecting to the Middle Fort Pond Brook sewer (MFPBS). The Village is currently hauling wastewater to Acton's WWTF. The Board of Selectmen will consider allowing the Village to connect to the system pending a recommendation from the CAC. Relevant issues include the scheduling of solutions (time and money to pump and haul the wastewater), insurance payment amount, initial costs, betterments, and permitting.

Yankee Village is currently getting bids on the rebuilding of the WWTF. Their insurance company is involved and hired an engineer to evaluate the alternatives. A major hurdle for the Village is the cost to connect to the MFPBS, which consists of a privilege fee and betterment.

The CAC conducted the following discussion regarding the Yankee Village Condominiums:

Q = Question from CAC;

A = Answer from Project Team; AYV = Answer from Yankee Village representatives

C = Comment from CAC;

R = Response from Project Team; RYV = Answer from Yankee Village representatives

Q: Will insurance cover the costs for rebuilding or connecting

AYV: Insurance is for replacement cost coverage so if connecting is less expensive than rebuilding it may be advantageous. The insurance company is obligated to fix the problem with a permanent solution.

Q: Time frame may be an issue if DEP approval is required.

AYV: Board of Health regulates the WWTF since the capacity is less than 10,000 gpd.

A: DEP would need to approve the connection to the MFBPS. The BOH will try to be consistent in its review of a proposed WWTF, but approval of a new WWTF does take some time.

C: Environmental risk with the existing situation warrants quick resolution. Location of Yankee Village is adjacent to a wastewater pumping station so sewer extension would only be across the street. Major concern is if the sewer system and Adams Street WWTF can accept the flow.

C: The CAC discussed the original financing of the sewer project and the process by which betterments were assessed. The discussion included how much money was allocated for expansion of the system and how much was for service of the primary sewer district. At issue was how costs were assessed to initial users.

Q: Where does the money from new connections and new betterments go?

A: Estimated that expansion capability costs \$1.3 million. This was not attributed to specific financing. Town benefited from some users paying the betterment fee up front instead of over time, which allows Town to postpone addressing the full costs of expansion capabilities. New users will pay for the entire expansion capability cost. A Privilege Fee is assessed to new users to cover costs for construction of the initial system.

Q: Can Yankee Village pay the Privilege Fee over time?

- A: No. There is no mechanism to allow this. The Privilege Fee must be paid in one payment. Betterments can be time payments.
- C: This sets a precedent throughout Town. If new users have to pay the privilege fee up front then any expansion of the sewer system would be heavy opposition.
- Q: Does this impact the CWRMP plan?
- A: The Town has to consider connection requests on a first come, first served method. The CWRMP has not considered Yankee Village a priority needs area, so this connection would use approximately 4,000 gpd that was initially allocated elsewhere.
- RYV: The condominium association will meet to evaluate its options. The initial cost is the biggest stumbling block for a connection to the MFPBS.
- C The CAC recommends accepting the Yankee Village request to connect to the MFPBS, but for the BOS to look for creative ways of financing the Privilege Fee.

Future Connections – West Acton Village

Brent Reager led the discussion of general solutions for Needs Areas. The discussion focused on West Acton Village and surrounding neighborhoods. The CAC has previously identified these areas as having a preferred solution of connection to the MFPBS.

- Q: How far can the sewer system extend given the limits on discharge capacity? Can the sewer reach Jefferson Arms on Elm Street?
- A: Yes, a connection would probably through the school properties if this alternative is ultimately selected.
- Q: Why does the map show no connections west of the railroad right of way?
- A: Cost is a consideration, but the area shown in the map is tentative and based on available capacity. Spencer/Tuttle/Flint neighborhood also has needs and any service line to West Acton would abut this neighborhood.
- C: There are two large red lots shown on the map but they are not shown as connected to a solution.
- R: The two lots are undeveloped and not buildable due to wetlands and floodplains.
- R: The project team will look at adding filters to the high priority map for developed/undeveloped lots, wetlands, and I/A and new/upgraded onsite systems.
- C: The CAC discussed the impact of sewerage on “unbuildable” lots and the reasons lots may be currently unbuildable. We must consider the impact of development on “unbuildable” lots because of new sewers.
- C: The Town must address the schools and minimize secondary growth impacts while addressing needs.
- C: West Acton Center is a priority, which is where economic growth is targeted according to other Town plans. Sewering West Acton Center would address Planning Board goals.
- C: Affordable housing is difficult to institute in West Acton because there are no sewers.
- Q: Is the Spencer/Tuttle/Flint area more important than west of West Acton Center (west of railroad tracks)?
- A: Spencer/Tuttle/Flint has its own environmental needs. Nevertheless, given limited capacity the CAC must decide on the priorities.

The CAC reviewed text for a press release. Completed survey forms were returned to Brent.

NEXT STEPS

The Project Team is working on the hydrogeologic assessment. The assessment will be forwarded to CAC and DEP for comment.

CONSENSUS ACTION ITEMS

- Complete the survey forms
 - Complete the hydrogeologic report
 - Recommend Board of Selectmen approve connection of Yankee Village Condominiums to the MFPBS.
-
- Recommend that Board of Selectmen consider alternative financing of the Privilege Fee.

Town of Acton

ACTON WASTEWATER CITIZENS ADVISORY COMMITTEE

Comprehensive Water Resources Management Plan /

Environmental Impact Report

CWRMP/EIR

Thursday, July 14, 2005

7:30 PM

ACTON TOWN HALL, ROOM 204

Meeting Goals:

Review the request of Yankee Village Condominiums to connect to the MFPBS

Begin discussions regarding future connections to the MFPBS, including West Acton Village

Prepare for the final prioritization of solutions at the August meeting

Agenda:

- Welcome
- Introductions
- Regulatory update
- Yankee Village Request
- Future Connections (WAV)
- Next Steps
- Evaluate the Meeting



MEMORANDUM

Acton Board of Health - Telephone (978) 264-9634

TO: CAC Members

FROM: Brent L. Reagor, R.S.

RE: 7/14 Meeting

DATE: July 6, 2005

As you are most likely aware, on Sunday June 19, the small wastewater treatment facility serving Yankee Village Condominiums (behind Roche Brothers) and the Acton Real Estate offices caught fire and was severely damaged. The facility, in its current state, is not able to function, and the condominiums are currently utilizing their raw wastewater lift tanks as holding tanks, and are pumping them on a alternating daily basis. At the upcoming meeting on Thursday, July 14, the major issue on the agenda will be the request from the residents of Yankee Village Condominiums for a connection to the Middle Fort Pond Brook Sanitary Sewer System. A number of you have posed questions regarding the gallons per day flow of the facility and the impact this addition would have on plans to service needs areas as delineated during Phase I of the CWRMP.

Yankee Village Condominiums consists of 41 units: 5 studios, 6 1-bedroom, 28 2-bedroom, 2 3-bedroom; for a total of 73 bedrooms spread over two buildings. The Acton Real Estate building consists of office space and 3 one bedroom units. According to the Acton Water District records from 1996-2005, the average winter water usage for the entire site is 5363 gpd (one winter's usage is much higher and skews this number). For water use modeling purposes, the Health Department is comfortable with an allocation of 5,000 gpd of wastewater flow to the Yankee Village/Acton Real Estate site.

The projected West Acton Phase I expansion, which is included in your packet, is approximately 39,000 gallons per day of flow. The Powdermill Plaza expansion, voted by the CAC, and approved by 4/2005 Town Meeting accounts for 4,000 gallons per day of flow.

49,000 gallons per day available
-5,000 gallons per day – Yankee Village
-4,000 gallons per day – Powdermill
-39,000 gallons per day – West Acton Phase I
1000 gallons per day reserve

As you can see, capacity is available for this connection. The condominium owners have been made aware of the sewer privilege fee (which takes the place of the betterments, now that final betterments have been issued), and are evaluating their options along with their insurance company.



MEMORANDUM

Acton Board of Health - Telephone (978) 264-9634

TO: CAC Members

FROM: Brent L. Reagor, R.S.

RE: Needs/Solutions Ranking Chart

DATE: July 6, 2005

Attached with this memo you will find a chart for the ranking of solutions for each of the 15 needs areas. We would like to collect this from you before the end of July (between the two meetings). If you have it completed by the 7/14 meeting, we will gladly take it from you.

The instructions are simple:

For each needs area, please rank (1-4, with 1 being the most favored) the solutions that you are all familiar with:

- 1) Connect to the existing Middle Fort Pond Brook Sanitary Sewer System
- 2) Construct of a new wastewater treatment facility and appurtenant collection system
- 3) Cluster groups of homes onto common treatment/disposal systems
- 4) Implementation of wastewater management district(s)

If you have any questions regarding the completion of the chart, please call or email me.

Draft #II
CWRMP

The goal is to send out a progress report and keep people informed

A part of the acceptance of the Middle Fort Pond ~~River~~ Sewer Project by the Department of Environmental Protection (DEP) was the agreement by the Town to undertake a Comprehensive Water Resources Management Planning effort to determine the wastewater disposal needs and analysis for the entire Town. At the 2002 Annual Town Meeting, \$500,000 was appropriated for the study. A call went out for residents for the Citizens' Advisory Committee (CAC). This committee has been meeting an average of four times a year since then.

The CAC and Town Staff chose Woodward & Curran (W&C) to work as consultants on the project. Their first task was to get the scope of the study approved by the Massachusetts Department of Environmental Protection (MADEP). The approved scope initially included 5 phases, which, thanks to the efforts of the CAC and the project team, have been consolidated into 3 phases.

Phase I of the study included the mapping of the Town noting those areas of need. Need is a technical term used to describe lots that "need" a solution other than their current onsite wastewater (septic) system. In many cases it is an area where the soils and drainage are poor, wetlands are close, and there are health concerns about the level of environmental protection offered by a conventional onsite wastewater system. All the needs areas were also inspected on the advice and after questioning by some of the CAC members. The needs map has gone through several iterations with suggested changes by the CAC. A total of 15 needs areas were identified, covering an area equal to approximately 2/3's of the Town. The CAC then prioritized the needs areas, placing those areas of greatest need at the top. The results of these analyses were presented at a public meeting in November of 2004, and published in a document: "Comprehensive Water Resources Management Plan", which is available in the Health Department office, the Acton Memorial Library, or from the Health Department page of the Town of Acton website: www.acton-ma.gov.

The project team, consisting of Acton Health Department Staff: Director Doug Halley and Environmental Health Specialist Brent Reagor, and W&C consultants developed a list of 4 possible solutions for the needs areas. Those solutions are: 1) Connection to the existing sewer system; 2) Construction of a new sewer collection system and wastewater treatment plant in a separate area of Town; 3) Clustering of homes and neighborhoods into smaller "satellite" systems with smaller scale wastewater treatment facilities; 4) The establishment of wastewater management districts – these districts would be distinct areas of the community where additional levels of regulatory management would be placed upon the onsite wastewater systems currently installed.

During the summer of 2005, the CAC is working with the project team to rank, in order of preference (1-4), the solutions for each of the 15 needs areas identified. This is the first step in Phase II of the project, which will conclude with a report detailing the



INTERDEPARTMENTAL COMMUNICATION

Acton Board of Health - Telephone 978-264-9634 - Fax 978-264-9630

July 14, 2005

TO: Don Johnson, Town Manager

FROM: Doug Halley, Health Director

SUBJECT: Yankee Village

The Wastewater Advisory Committee met on July 14th with the Trustees of Yankee Village regarding their interest in connecting to the sewer system. Yankee Village recently suffered the loss of their on-site Treatment Plant due to a catastrophic fire. They are now examining the option of rebuilding or connecting to the Town's sewer system.

The Committee reviewed their priority list and the excess capacity available at the Town's Treatment Plant. Their priority list includes the southern portion of West Acton Center, the Gates and Douglas Schools, the Tuttle/Flint subdivisions and the Powdermill Plaza. Based on the current need of Yankee Village and consistent with the goals of the Committee to provide wastewater solutions to West Acton Village and Powdermill Plaza, the Committee unanimously recommended that the Board of Selectmen include Yankee Village in the sewer service area.

The Committee also further recommended that the Selectmen work with Yankee Village to find creative ways to finance the sewer privilege fee so that time payments can be accessed rather than an up front payment of the sewer privilege fee. The Committee and Yankee Village would appreciate it if this could be placed on the Selectmen's upcoming agenda on Monday. Please advise me on how to proceed.

Rank (1-4) with 1 being your first choice, etc...

Needs Area #	Description	Current Priority Status	Connect to Existing Sewers	Construct New WWT/FSewers	Cluster/Neighborhood System	Wastewater Management District
1	North Acton Village Robbins Brook Marshall Crossing	Medium				
2	Nagog Woods Acorn Park North Acton Woods	Low				
3	East Acton Village Route 2A Concord Road	High				
4	Robbins Park	Medium				
5	Brucewood Estates	Medium				
6	Brookside Apts. Powdermill Plaza	Low				
7	Maynard Border (Main St.)	High				
8	Heath Hen Meadow Liberty Street Slow Street	Low				
9	Spencer/Tuttle/Flint Nash/Downey Dover Heights	High				
10	West Acton Center	High				
11	Indian Village Colonial Acres Forest Glen	High				
12	Flagg Hill	Medium				
13	Acton Center	Low				

* In process of connecting to MFPBS

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MEETING DATE: April 20, 2005

REFERENCE: Acton CWRMP
CAC Meeting

ATTENDEES: CAC:
Jane Ceraso – Acton Water District
Ann Chang – CAC / SAC
Nancy Tavernier – CAC / SAC
Lauren Rosenzweig - BOS
Pat Cumings – resident
Helen Probst – resident
Eric Hilfer – ACES
Gigi Hopkins – Land Steward, Wetherbee Conservation land
Terra Friedrichs – resident
Carol Holley – ACES, EAVPC
Hart Millett – resident
Sid Levin - resident
Doug Halley – Health Director
Brent Reagor – Health Dept
Bob Rafferty – Woodard & Curran

DISTRIBUTION: Attendees
Dan Garson – W&C
Helen Gordon – W&C
W&C File
Posting on Town website

Submitted by: Robert Rafferty, P.E.

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Woodard & Curran, Inc. Andover Massachusetts, Attn: Bob Rafferty. brafferty@woodardcurran.com

ATTACHED ITEMS

Agenda
Handout – Preparation Memo dated 4/07/05
Maps of possible disposal site fieldwork

AGENDA ITEMS

Welcome and Introductions:

Doug Halley led the introductions and presented the goals of the meeting. He also discussed the recent change in the discharge (NPDES) permit for the town's wastewater treatment facility, which increased the permitted discharge capacity to 299,000 gpd from 250,000 gpd. This increase in the NPDES permit may provide an alternative solution to some needs areas.

Disposal Site Evaluation Update:

Brent Reagor presented an update on the hydrogeologic study conducted at the three selected parcels – Wetherbee Street (at Route 2), North Acton (near NARA), and Adams Street (near the WWTF). Refer to the attached maps. The fieldwork is complete and soil samples have been sent to the laboratory for analysis. On-site hydrogeologic investigation included:

Borings – monitoring well installation (8 borings and 6 wells)

 Bore hole permeability tests (Falling head test)

 Drill to refusal

 Installation of wells where groundwater was encountered

Test Pits – excavation to groundwater (4 pits at Wetherbee Street and 3 pits at North Acton)

 Percolation tests and soils classification

Based on the fieldwork it appears only the Wetherbee site is favorable for further analysis. The following table summarizes the issues:

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- Decentralized collection, treatment and disposal
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 (Q = Question from CAC; A = Answer from Project Team; C = Comment from CAC; R = Response from Project Team.)

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- A: Legislature recently changed the way the state disposes of land, making it very difficult for towns to purchase state land. Cost is a criterion in the overall selection process. Therefore, we focused our investigation on the town-owned land adjacent to the state parcel.
- C: The CWRMP process appears to be focusing on sewerage and the Town’s consultant appears to be steering the town toward sewers, which would benefit the consultant.

- R: The CWRMP process is set by the loan agreement the town has with DEP. We are trying to identify all feasible alternatives and we are obligated to include all identified alternatives in the discussion and evaluation. Sewering may be a potential solution. No final decisions or recommendations have been made.
- C: The CWRMP process could be more open to the public because it now appears that the CWRMP has set solutions in mind.
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IV. Establish wastewater management districts

The town now has a basic septic system management structure that requires pumping of residential tanks every two years and pumping of commercial tanks every year. A potential alternative solution for Needs Areas is to require a higher level of wastewater treatment on parcels comprising the Needs Areas. Innovative/Alternative (I/A) systems, as discussed in the June 2004 CAC meeting, provide higher levels of treatment but require more effort to operate, maintain and manage because I/A systems are micro-scale treatment facilities. One solution may be to institute requirements within specific Needs Areas for O&M and management of private on-lot I/A systems.

There are multiple alternatives regarding treatment levels, financing systems, and levels of management for a wastewater management entity. For example, the town could require private I/A owners to meet specific treatment levels and provide proof of regular operation and maintenance (O&M) and management by a qualified private contractor. Or, the town could implement a public utility (management district) that provides O&M and management financed through user fees.

- C: The town should not pick up the bill for private problems. People who do not need an alternative wastewater system will not, and should not, pay for others that have problems.
- C: It may be difficult to get a public utility through town meeting, because it means government control of private property and access to private lots.
- R: The program could be funded 100% by user fees. There are many different management structures that could keep wastewater treatment and disposal local and under private control but with more oversight and safeguards.
- C: Some neighborhood developments have condo-like agreements to maintain a community treatment system. These are maintained well, and use is monitored by the association.

- C: The willingness to accept a management utility or district may depend on whether the district is for new a development or existing neighborhoods.
- C: This may be a long-term solution given the 20-year planning process. However, it may not make sense to set up now.
- C: It could help with the water balance.
- C: Most people acknowledge that sewers take care of the problem and can increase property values, as well as making it easier to sell a property.
- C: There may be some perceived value in this without the negatives of public construction.
- R: Establishing a management utility (or district) may provide some level of confidence that the private system was maintained properly, and that there is a system in place acceptable to the town. This is better than standard Title 5 (septic) systems.
- R: This alternative is for Needs Areas that have demonstrated some problem(s) maintaining continued reliance on standard septic systems. Acton has many I/A systems (#2 in the state for number of systems outside of Cape Cod communities), and many are located in the Needs Areas.
- Q: Are the existing I/A systems for replacement or new construction? What kinds of systems are there?
- A: About 90% are repair systems. Types include FAST, Singulair, Bioclere, and JET.

III. Group parcels into smaller cluster/community systems

- C: Cluster systems could encourage more buildout. This is a negative.
- Q: Are there many potential cluster systems if they are located near problem areas?
- A: There is not much potential for this option. Siting is difficult. They may have to be sited some distance away from the Needs Area. This could be expensive, and costs play a role in decision-making. Public/private partnership is an alternative since there are several private treatment facilities, especially in North Acton.
- C: The town should require new developments to have cluster construction.
- Q: Public/private partnerships – Can a private entity provide service to abutting parcels? Can development be linked to providing capacity for neighbor's needs?
- A: Public/private partnerships are an option. Several private treatment facilities exist in Acton. In Mashpee, the town purchased capacity from a private entity to serve neighborhood needs.
- C: Irrigation by using effluent could be an alternative, aside from the public relations image.
- C: Many people do not react favorably to proposals that spray effluent on public spaces – especially playing fields.
- Q: Are graywater systems a benefit or a possible solution?
- A: Graywater systems are currently prohibited. There is no incentive to construct graywater systems. New rules are being explored at the state level.

II. Construct a new satellite wastewater treatment and collection system

- C: If Wetherbee Street is the only viable site then it should be linked to improving the Bruce Freeman rail trail.
- C: The rail trail schedule is moving more quickly than the CWRMP schedule.
- C: The ability to get another big sewer construction project through town meeting is questionable.
- Q: How deep are the sewer pipes?

- A: Typical gravity sewers are about 8-feet deep. Low-pressure sewers are about four to five feet deep.
- Q: Is it appropriate to lay a sewer pipe along a stream, say within 30-feet?
- A: Yes. Often the best route for a sewer is along a route parallel to streams. Acton has several stream crossing. Appropriate measures must be taken to protect the streams.
- C: The political reality is that if a disposal field can provide a dual or improved use, or preserve existing use, the field is more likely to be accepted.
- R: At Wetherbee for instance, the existing use can be maintained once the construction is complete by constructing a subsurface disposal field. There will not be venting pipes because the system will be dosed by pressure.
- Q: Does the subsurface disposal field have a shorter life span than a septic system's field?
- A: Not really. A treatment facility will treat to a higher level, helping to preserve the life of the disposal field.
- C: Buildout within the sewered area may be an unintended consequence. Water demand may change also because septic systems now limit the potential for growth on individual parcels. Restaurants may be able to expand, etc. if sewers are constructed.
- R: Secondary growth impacts are a consideration and are included as a decision criterion in the matrix developed by the CAC. However, further review of the impacts should be conducted if this alternative is selected.
- Q: The WR Grace plumes are approaching the School Street wells. The wells will not contain the plume for very long. How will a subsurface disposal field at Wetherbee affect the plume?
- A: This specific scenario has not been studied yet. A more involved hydrogeologic analysis, which includes modeling, would be conducted prior to moving forward with a satellite solution. The impact of the plume could be included in this process.

I. Connect to the existing system

The town's NPDES (WWTF discharge) permit has been modified to allow 299,000 gpd, an increase of 49,000 gpd. This may provide solutions to Needs Areas adjacent to the existing sewer district. The additional discharge capacity will be sent to the existing disposal field.

- C: The areas that were initially included in the sewer district should be given priority.
- R: Some of these areas are not actually Needs Areas as determined by this CWRMP. Many of the initial areas were included because of geography, sewer routing, etc.
- C: Priority should be given to Powdermill Plaza, West Acton, Dover Heights, North Audubon, Indian Village, schools in West Acton, and Spencer Road area including Flint, Mallard. A decision should be made whether to construct a sewer in Central Street or follow the railroad bed.
- Q: What are the needs in West Acton Village? The village character could be changed by development if sewers are brought to the area.
- R: West Acton Village has three I/A systems, and one parcel has more variances than any other does in town. Secondary growth impacts are a criterion for decision-making and are included in the matrix developed by the CAC.
- 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.

- R: Powdermill Plaza negotiations continue. The intent is to reach an equitable agreement to remove the Plaza's treatment facility and connect it to the town's sewer system.
- Q: How much flow would be allocated to Powdermill Plaza? What is the status?
- A: Approximately 4,000 gpd – 6,000 gpd.
- R: The 49,000 gpd will not address all high priority Needs Areas listed by the CAC.
- C: The schools' needs appear to be legitimate but the buildings are not near any existing infrastructure.
- R: The state has mandated that the school properties at Gates/Douglas be considered one property, which results in the total flow becoming greater than 15,000 gpd. This triggers additional regulations for treatment. The state has not acted on enforcement yet because of the CWRMP process.
- C: A public education program could be instituted to ensure that existing systems do not fail.
- R: Many systems would fail inspection because of the soils, groundwater, etc. I/A systems would still be required at a minimum. The Health Department sent public education mailings in the past, but homeland security requirements have taken much of the available time and budget for these activities.
- C: Priorities could be set with more clarity if the actual wastewater flows for the Needs Areas were known with more accuracy.
- C: The schools' contribution to sewerage would be the cost equal to replacing the onsite systems with new systems meeting regulations. It would be helpful to have a quick in-house estimate of the cost/benefit of constructing new onsite systems for the schools.
- Q: Can the CAC get more information on the typical costs for I/A systems?
- A: The project team will review the information at the Health Department and report back to the CAC.

WATER REUSE

Brent Reagor led the discussion regarding an alternative disposal site located in the Assabet wellfield on High Street. We did not conduct a hydrogeologic assessment of this area because information is available on the soils and geology of the Assabet wellfield from previous studies. The wellfield may provide additional capacity to optimize the existing sewer system and serve Needs Areas that cannot be served by the current WWTF and disposal field.

- Q: Has wastewater effluent been discharged to wellfields in Massachusetts?
- A: Not by a municipality. Reuse regulations are being reviewed by DEP but no final document has been published.
- Q: Is there long-term data on reuse?
- A: Yes, from California for example, though the specific use of the wastewater effluent (potable water, irrigation, etc.) should be reviewed before applying the results to Acton's situation.
- C: Epidemiology studies can be tricky because populations are not static – people move. The studies tend not to be conclusive.
- R: Acton is taking part in a study by Johns Hopkins to review the WWTF effluent for emerging contaminants.

A subgroup of the CAC was established to review whether the wastewater needs lead to reuse as a solution. The subgroup will review the concerns, issues, and challenges to reuse. Volunteers and

nominees for the subgroup led by Brent Reagor are, Eric Hilfer, Jane Ceraso, Pat Cumings, and Art Gagne. The CAC suggested that a Board of Health member be part of the group.

REGULATORY UPDATE

The CWRMP process is the result of a special procedure issued by DEP that allowed the construction of the Middle Fort Pond Brook sewer system prior to conducting wastewater planning. The Project Team met with DEP in February to present the CWRMP process, review the scope of the hydrogeologic study, and discuss the requested change in the WWTF discharge permit. DEP wants a detailed hydrogeologic investigation prior to submitting an Environmental Impact Report (EIR), which is the final document of the CWRMP process.

The Project Team's plan is to submit an expanded Environmental Notification Form (ENF) shortly after the next CAC meeting. We will submit an expanded ENF to Massachusetts Environmental Policy Act (MEPA), requesting a single EIR. However, MEPA may still require a draft EIR prior to the final EIR.

NEXT STEPS

The Project Team will complete the hydrogeologic assessment once the laboratory results are delivered. The assessment will be forwarded to CAC and DEP for comment.

At the next CAC meeting:

- The CAC will complete the pairing of Needs Areas with potential solutions, and review and rank the potential solutions for each Needs Area.
- Once the CAC ranks solutions, the Project Team will begin the analysis of the potential wastewater treatment techniques and technologies, including refined flows, costs, and management practices.
- The reuse subgroup will update the CAC on its work.

CONSENSUS ACTION ITEMS

- The Project Team will refine the flow estimates for the priority Needs Areas and report back to the CAC so a final priority list can be developed.
- The Project Team will conduct a quick in-house analysis of the cost for I/A systems at the Gates/Douglas School.
- The Project Team will provide cost information for the various types of I/A systems in Acton.
- The reuse subgroup will meet to set its goals and mission, and begin discussions.
- Meeting minutes will be posted on the Town's website.

Town of Acton

Citizen's Advisory Committee Meeting

Comprehensive Water Resources Management Plan /

Environmental Impact Report

CWRMP/EIR

Wednesday, April 20, 2005

7:00 PM

MEMORIAL LIBRARY

Meeting Goals:

Discuss the results of the recent disposal site evaluations

Prioritize solutions for the Needs Areas

Receive input and advice from the citizens of Acton.

Agenda:

- | | | |
|-----------------------------------|--------------|--------|
| • Welcome and Introductions | Doug Halley | 5 min |
| • Disposal Site Evaluation Update | Bob Rafferty | 20 min |
| • Prioritization of Solutions | All | 60 min |
| • Regulatory Update | Dan Garson | 10 min |
| • Water Reuse | Brent Reagor | 15 min |
| • Next Steps | Bob Rafferty | 10 min |



MEMORANDUM

Acton Board of Health - Telephone (978) 264-9634

TO: Members of the CAC

FROM: Brent L. Reagor, R.S.

RE: 4/20 CAC Meeting

DATE: 4/7/2005

As we approach our next meeting, we are in what is hopefully the last year of this phase of the project. Now that 15 Needs Areas have been delineated and ranked in order of priority, we must apply a solutions matrix in each area and develop a ranking of those solutions.

To refresh your memory, the possible solutions are:

- I. Connect to the existing sewer system
- II. Construct a new satellite wastewater treatment and collection system
- III. Group parcels into smaller cluster/community systems
- IV. Establish wastewater management district(s)

The Project Team will present the results of the initial site investigations at the Adams Street, Wetherbee Street, and Quarry Road sites, and what those results mean in the context of possible solutions for needs areas.

The Project Team will present information to you, prior to the meeting, listing what has been determined to be the "Primary Need" or reason for each area to be classified as a needs area. This information should aid you in your solutions ranking thoughts and decisions.

As you think about possible solutions, here are some questions you should ask yourself:

Solution I. Connect to the existing sewer system:

- 1) With a pending surplus capacity of 49,000 gallons per day, which adjacent needs areas should be connected?
- 2) What is the reality of discharging to the wellfield, both politically and environmentally?

Solution II. Construct a new satellite wastewater treatment and collection system

- 1) What is the political viability of another major sewer project in Acton?
- 2) Do you believe that subsurface disposal of wastewater would alter the use of a parcel of open space?

Solution III. Group parcels into smaller cluster/community systems

- 1) Would you support the Town entering into Public/Private partnerships with major landowners/companies in order to solve wastewater needs issues?
- 2) How do you feel about irrigation of public or private fields with highly treated wastewater?
- 3) Could/would you support the creation of a Wastewater Management Entity (pseudo-utility) to operate and maintain privately owned cluster wastewater collection and treatment systems? What about outright ownership of those systems?

Solution IV. Establish wastewater management district(s)

- 1) If the annual cost was less than or equal to the current average sewer bill, would you be willing to pay that rate for operation, maintenance, inspection, and (if necessary) replacement of your onsite wastewater system?
- 2) Could/would you support the creation of a Wastewater Management Entity (pseudo-utility) to operate and maintain privately owned onsite wastewater collection and treatment systems? What about outright ownership of those systems?
- 3) What is your overall perception of the state of environmental protection as it relates to water quality/watersheds in the Town of Acton? Are we doing enough now?

Finally, I would like to solicit a couple of volunteers to be initial members of a Stakeholder Working Group on the feasibility of Indirect Potable Reuse (wellfield discharge) in Acton. Myself and Helen Gordon from W&C are members of a regional committee to promote reuse of treated wastewater and the Commonwealth is in the process of revising its regulations in this area. I would expect that a small group (no more than 8) people would meet on a semi-regular basis to discuss and possibly promote the reuse of treated wastewater within Acton.

This is just the initial communication prior to the meeting. In a week or so you will receive an agenda and any other additional materials for the meeting.

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The town now has a basic septic system management structure that requires pumping of residential tanks every two years and pumping of commercial tanks every year. A potential alternative solution for Needs Areas is to require a higher level of wastewater treatment on parcels comprising the Needs Areas. Innovative/Alternative (I/A) systems, as discussed in the June 2004 CAC meeting, provide higher levels of treatment but require more effort to operate, maintain and manage because I/A systems are micro-scale treatment facilities. One solution may be to institute requirements within specific Needs Areas for O&M and management of private on-lot I/A systems.

There are multiple alternatives regarding treatment levels, financing systems, and levels of management for a wastewater management entity. For example, the town could require private I/A owners to meet specific treatment levels and provide proof of regular operation and maintenance (O&M) and management by a qualified private contractor. Or, the town could implement a public utility (management district) that provides O&M and management financed through user fees.

- C: The town should not pick up the bill for private problems. People who do not need an alternative wastewater system will not, and should not, pay for others that have problems.
- C: It may be difficult to get a public utility through town meeting, because it means government control of private property and access to private lots.
- R: The program could be funded 100% by user fees. There are many different management structures that could keep wastewater treatment and disposal local and under private control but with more oversight and safeguards.
- C: Some neighborhood developments have condo-like agreements to maintain a community treatment system. These are maintained well, and use is monitored by the association.

- C: The willingness to accept a management utility or district may depend on whether the district is for new a development or existing neighborhoods.
- C: This may be a long-term solution given the 20-year planning process. However, it may not make sense to set up now.
- C: It could help with the water balance.
- C: Most people acknowledge that sewers take care of the problem and can increase property values, as well as making it easier to sell a property.
- C: There may be some perceived value in this without the negatives of public construction.
- R: Establishing a management utility (or district) may provide some level of confidence that the private system was maintained properly, and that there is a system in place acceptable to the town. This is better than standard Title 5 (septic) systems.
- R: This alternative is for Needs Areas that have demonstrated some problem(s) maintaining continued reliance on standard septic systems. Acton has many I/A systems (#2 in the state for number of systems outside of Cape Cod communities), and many are located in the Needs Areas.
- Q: Are the existing I/A systems for replacement or new construction? What kinds of systems are there?
- A: About 90% are repair systems. Types include FAST, Singulair, Bioclere, and JET.

III. Group parcels into smaller cluster/community systems

- C: Cluster systems could encourage more buildout. This is a negative.
- Q: Are there many potential cluster systems if they are located near problem areas?
- A: There is not much potential for this option. Siting is difficult. They may have to be sited some distance away from the Needs Area. This could be expensive, and costs play a role in decision-making. Public/private partnership is an alternative since there are several private treatment facilities, especially in North Acton.
- C: The town should require new developments to have cluster construction.
- Q: Public/private partnerships – Can a private entity provide service to abutting parcels? Can development be linked to providing capacity for neighbor's needs?
- A: Public/private partnerships are an option. Several private treatment facilities exist in Acton. In Mashpee, the town purchased capacity from a private entity to serve neighborhood needs.
- C: Irrigation by using effluent could be an alternative, aside from the public relations image.
- C: Many people do not react favorably to proposals that spray effluent on public spaces – especially playing fields.
- Q: Are graywater systems a benefit or a possible solution?
- A: Graywater systems are currently prohibited. There is no incentive to construct graywater systems. New rules are being explored at the state level.

II. Construct a new satellite wastewater treatment and collection system

- C: If Wetherbee Street is the only viable site then it should be linked to improving the Bruce Freeman rail trail.
- C: The rail trail schedule is moving more quickly than the CWRMP schedule.
- C: The ability to get another big sewer construction project through town meeting is questionable.
- Q: How deep are the sewer pipes?

- A: Typical gravity sewers are about 8-feet deep. Low-pressure sewers are about four to five feet deep.
- Q: Is it appropriate to lay a sewer pipe along a stream, say within 30-feet?
- A: Yes. Often the best route for a sewer is along a route parallel to streams. Acton has several stream crossings. Appropriate measures must be taken to protect the streams.
- C: The political reality is that if a disposal field can provide a dual or improved use, or preserve existing use, the field is more likely to be accepted.
- R: At Wetherbee for instance, the existing use can be maintained once the construction is complete by constructing a subsurface disposal field. There will not be venting pipes because the system will be dosed by pressure.
- Q: Does the subsurface disposal field have a shorter life span than a septic system's field?
- A: Not really. A treatment facility will treat to a higher level, helping to preserve the life of the disposal field.
- C: Buildout within the sewered area may be an unintended consequence. Water demand may change also because septic systems now limit the potential for growth on individual parcels. Restaurants may be able to expand, etc. if sewers are constructed.
- R: Secondary growth impacts are a consideration and are included as a decision criterion in the matrix developed by the CAC. However, further review of the impacts should be conducted if this alternative is selected.
- Q: The WR Grace plumes are approaching the School Street wells. The wells will not contain the plume for very long. How will a subsurface disposal field at Wetherbee affect the plume?
- A: This specific scenario has not been studied yet. A more involved hydrogeologic analysis, which includes modeling, would be conducted prior to moving forward with a satellite solution. The impact of the plume could be included in this process.

I. Connect to the existing system

The town's NPDES (WWTF discharge) permit has been modified to allow 299,000 gpd, an increase of 49,000 gpd. This may provide solutions to Needs Areas adjacent to the existing sewer district. The additional discharge capacity will be sent to the existing disposal field.

- C: The areas that were initially included in the sewer district should be given priority.
- R: Some of these areas are not actually Needs Areas as determined by this CWRMP. Many of the initial areas were included because of geography, sewer routing, etc.
- C: Priority should be given to Powdermill Plaza, West Acton, Dover Heights, North Audubon, Indian Village, schools in West Acton, and Spencer Road area including Flint, Mallard. A decision should be made whether to construct a sewer in Central Street or follow the railroad bed.
- Q: What are the needs in West Acton Village? The village character could be changed by development if sewers are brought to the area.
- R: West Acton Village has three I/A systems, and one parcel has more variances than any other does in town. Secondary growth impacts are a criterion for decision-making and are included in the matrix developed by the CAC.
- 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.

- R: Powdermill Plaza negotiations continue. The intent is to reach an equitable agreement to remove the Plaza's treatment facility and connect it to the town's sewer system.
- Q: How much flow would be allocated to Powdermill Plaza? What is the status?
- A: Approximately 4,000 gpd – 6,000 gpd.
- R: The 49,000 gpd will not address all high priority Needs Areas listed by the CAC.
- C: The schools' needs appear to be legitimate but the buildings are not near any existing infrastructure.
- R: The state has mandated that the school properties at Gates/Douglas be considered one property, which results in the total flow becoming greater than 15,000 gpd. This triggers additional regulations for treatment. The state has not acted on enforcement yet because of the CWRMP process.
- C: A public education program could be instituted to ensure that existing systems do not fail.
- R: Many systems would fail inspection because of the soils, groundwater, etc. I/A systems would still be required at a minimum. The Health Department sent public education mailings in the past, but homeland security requirements have taken much of the available time and budget for these activities.
- C: Priorities could be set with more clarity if the actual wastewater flows for the Needs Areas were known with more accuracy.
- C: The schools' contribution to sewerage would be the cost equal to replacing the onsite systems with new systems meeting regulations. It would be helpful to have a quick in-house estimate of the cost/benefit of constructing new onsite systems for the schools.
- Q: Can the CAC get more information on the typical costs for I/A systems?
- A: The project team will review the information at the Health Department and report back to the CAC.

WATER REUSE

Brent Reagor led the discussion regarding an alternative disposal site located in the Assabet wellfield on High Street. We did not conduct a hydrogeologic assessment of this area because information is available on the soils and geology of the Assabet wellfield from previous studies. The wellfield may provide additional capacity to optimize the existing sewer system and serve Needs Areas that cannot be served by the current WWTF and disposal field.

- Q: Has wastewater effluent been discharged to wellfields in Massachusetts?
- A: Not by a municipality. Reuse regulations are being reviewed by DEP but no final document has been published.
- Q: Is there long-term data on reuse?
- A: Yes, from California for example, though the specific use of the wastewater effluent (potable water, irrigation, etc.) should be reviewed before applying the results to Acton's situation.
- C: Epidemiology studies can be tricky because populations are not static – people move. The studies tend not to be conclusive.
- R: Acton is taking part in a study by Johns Hopkins to review the WWTF effluent for emerging contaminants

A subgroup of the CAC was established to review whether the wastewater needs lead to reuse as a solution. The subgroup will review the concerns, issues, and challenges to reuse. Volunteers and

nominees for the subgroup led by Brent Reagor are, Eric Hilfer, Jane Ceraso, Pat Cumings, and Art Gagne. The CAC suggested that a Board of Health member be part of the group.

REGULATORY UPDATE

The CWRMP process is the result of a special procedure issued by DEP that allowed the construction of the Middle Fort Pond Brook sewer system prior to conducting wastewater planning. The Project Team met with DEP in February to present the CWRMP process, review the scope of the hydrogeologic study, and discuss the requested change in the WWTF discharge permit. DEP wants a detailed hydrogeologic investigation prior to submitting an Environmental Impact Report (EIR), which is the final document of the CWRMP process.

The Project Team's plan is to submit an expanded Environmental Notification Form (ENF) shortly after the next CAC meeting. We will submit an expanded ENF to Massachusetts Environmental Policy Act (MEPA), requesting a single EIR. However, MEPA may still require a draft EIR prior to the final EIR.

NEXT STEPS

The Project Team will complete the hydrogeologic assessment once the laboratory results are delivered. The assessment will be forwarded to CAC and DEP for comment.

At the next CAC meeting:

- The CAC will complete the pairing of Needs Areas with potential solutions, and review and rank the potential solutions for each Needs Area.
- Once the CAC ranks solutions, the Project Team will begin the analysis of the potential wastewater treatment techniques and technologies, including refined flows, costs, and management practices.
- The reuse subgroup will update the CAC on its work.

CONSENSUS ACTION ITEMS

- The Project Team will refine the flow estimates for the priority Needs Areas and report back to the CAC so a final priority list can be developed.
- The Project Team will conduct a quick in-house analysis of the cost for I/A systems at the Gates/Douglas School.
- The Project Team will provide cost information for the various types of I/A systems in Acton.
- The reuse subgroup will meet to set its goals and mission, and begin discussions.
- Meeting minutes will be posted on the Town's website.

Disposal Site Evaluation Update

WHY?

Part of a prescribed process regulated and mandated by DEP. After ranking needs areas we evaluate all alternative solutions. Surface water discharge will NOT happen.

Decentralized

- Onsite (do nothing or increased management)
- Cluster (including private/public partnerships)
- Satellite

Centralized

Hydrogeo study is part of *Satellite System* assessment.

HOW?

Town-wide search for potential treatment and disposal locations to evaluate all alternatives – Not specific to any Needs Area and no preconceptions of potential solutions

- Sand & Gravel with groundwater > 6'
- Large lots primarily undeveloped
- Last CAC meeting prioritized these locations
- Ranked Needs areas and matched needs areas with solutions.

Three sites identified by AOI process. Specific investigation methods approved by DEP.

On-site hydrogeologic investigation included:

- Borings – monitoring well installation 8 borings and 6 wells
- Bore hole permeability tests (Falling head test)
- Drill to refusal
- Installation of wells were groundwater was encountered

Well	Sand Depth (@ till)	Groundwater @	Refusal / End
NA1	23 – mixed soil	22	23
NA2	15 – mixed soil	None	15
W1	40	14.5	52
W2	9	7.5	20
W3	10	3.5	15
W4	40	9	50
A1	25 (3-8)	None	50
A2	30	16	35

Test Pits – soil evaluation and classification

W – Mirror results from the boring/well program

NA- More sand in test pits with groundwater at lower elevation test pit

Summary of Sites Hydrogeologic Assessment

Site	Comments	Pros	Cons
North Acton	Near Medium Needs Area (1)	Limited neighbors Town-owned parcel	Mixed soils –erratic Gravel removed Septage lagoons Near wellfield
Wetherbee	Near High Needs Area - E. Acton (3) 70 acres most probable area is near Rte 2 / Wetherbee junction	Good soils Subsurface disposal potential	Deeded Conservation Restriction (Solely for conservation purposes)
Adams Street	Adjacent to WWTF – expansion of discharge?	Adjacent to WWTF	Vernal pool Maynard WWTF groundwater

*lens of till ~ 5'
Temporary wt*

Status:

Somewhere near 500,000 gpd – get it off site. Be cautious – remember South Acton site with modeling, loading tests, more borings.

Soil samples to lab to confirm analysis.

Finish calculation and classification

Baseline loading estimate.

CAC to Select sites for further analysis.

Regulatory Update

Per meeting with DEP in February:

When we file the EIR, hydrogeologic study must be completed – not budgeted yet. Our strategy is to file and ENF (expanded ENF) to consolidate everything - comprised of Phase 1 and Phase 2 reports, correspondence, meeting minutes, etc to justify a single EIR.

DEP will comment on ENF – Certificate will be the scope of work for the next phase of the EIR so town can budget appropriately. May still require a draft and final EIR.

Next Steps

Hydrogeo report to CAC and DEP for comment

CAC guidance to select most favorable satellite alternative if any exist

Wastewater techniques and technologies – refresh CAC on treatment technologies.

Pair solutions (techniques and technologies) with needs areas – Issue updated table

What is a "Needs Area"? FALL 2004 TOWN MEETING

A needs area is defined as an area of parcels in which a majority has a need for a wastewater disposal solution other than an onsite septic system.

What Criteria Were Used to Determine a "Need"?

Technical Criteria

Regulatory Minimum Setbacks:

- Property lines
- Buildings
- Wetlands
- Flood Plain
- Surface Water
- Public Wells
- Private Wells
- Vernal Pools

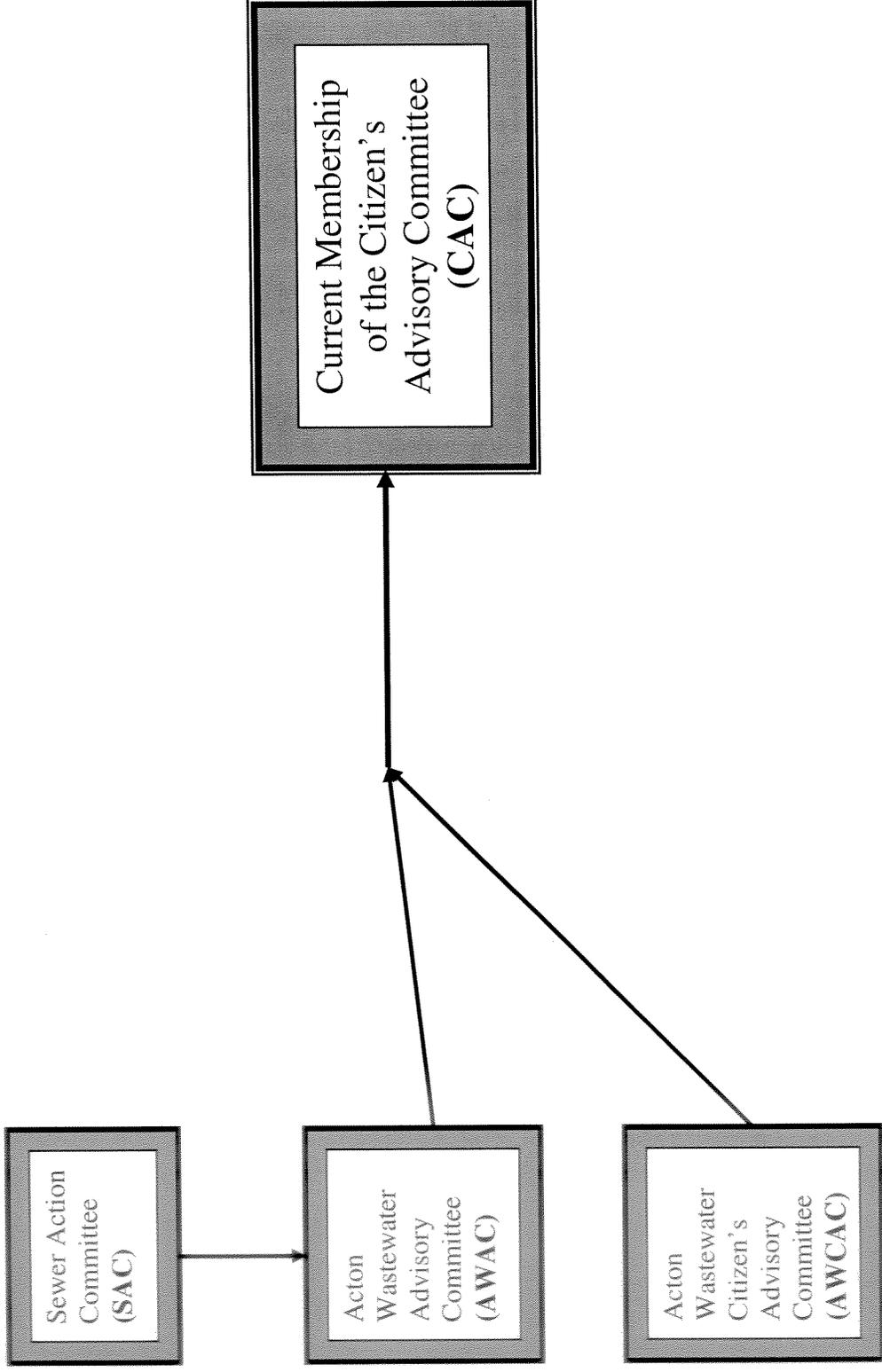
Design Parameters

- Percolations Rate
- Depth to Groundwater
- Depth to Bedrock

Non-Technical Criteria

- Aesthetics
- Neighborhood Character
- Archeological and Historical Impact
- Regulatory Pressure
- Potential link to other projects/opportunities

Genesis of the Current Citizen's Advisory Committee



Current Members of the Citizens' Advisory Committee

COMMITTEE MEMBERS	AFFILIATION
Kathleen Doran Boyle	Citizen
Tony Capobianco	Business/Property Owner
Jane Ceraso	Acton Water District
Ann Chang	Citizen
Pat Cummings	Citizen
Walter Foster	Board of Selectmen
Art Gagne'	Citizen
Eric Hilfer	ACES
Bob Johnson	Board of Selectmen
Bill McInnis	Board of Health
Helen Probst	Citizen
Len Rappoli	OAR
Lauren Rosenzweig	Planning Board
Jim Shope	Business/Property Owner
Nancy Tavernier	Citizen
PROJECT TEAM	AFFILIATION
Doug Halley	Acton Health Department
Brent Reagor, RS	Acton Health Department
Helen Gordon, PE	Woodard and Curran
Bob Rafferty, PE	Woodard and Curran

Citizens' Advisory Committee for the Comprehensive Water Resources Management Plan

Mission Statement:

- “1) To offer views, comments and opinions about the CWRMP to the Town and Consultant Team***
- 2) To help the Town and Consultant Team identify all relevant issues, topics, and concerns about the CWRMP by offering good ideas and constructive comments***
- 3) To demonstrate to MEPA and DEP by its periodic meeting and discussions that the diverse views of the community have been considered in the process***
- 4) To provide outreach to Acton residents and the community at large to communicate the process and results of the CWRMP***
- 5) To help build a consensus for the Water Resources Management Plan that emerges from this process”***

How do I get Involved?

1) Apply to join the CAC

--Take a membership application, fill it out and return it to the Board of Health Office, no later than November 22, 2004

2) Come to the Public Information Meeting

--The CAC is holding a Public Information Meeting on November 16, 2004 at 7pm in Room 204 at Town Hall.

3) Send your comments to the CAC by email

-- Send an email to CAC@acton-ma.gov

4) Send comments by mail

-- Send your comments, questions, or concerns to the CAC at:

CAC
c/o Acton Health Dept.
472 Main Street
Acton, MA 01720

WOODARD & CURRAN, INC.
35 New England Business Center
Suite 180
Andover, Massachusetts 01810

Tel. 978-557-8150
Fax: 978-557-7948
mail@woodardcurran.com
http://www.woodardcurran.com

MEETING DATE: November 11, 2004

REFERENCE: Acton CWRMP
Public Information Meeting

DISTRIBUTION: CAC
Doug Halley – Health Department
Brent Reagor – Health Department
Dan Garson – W&C
Helen Gordon – W&C
W&C File
Posting on Town website

Submitted by: Robert Rafferty, P.E.

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Woodard & Curran, Inc. Andover Massachusetts, Attn: Bob Rafferty. brafferty@woodardcurran.com

ATTACHED ITEMS

Agenda
Report of the Citizen's Advisory Committee
Map: Disposal Sites for High Priority Areas
Map: Maximum Needs Areas Delineation
Map: High Priority Needs Planning Areas
Presentation Handout – Where are We Now?
CAC Member Application

AGENDA ITEMS

Welcome and Introductions:

Doug Halley led the introductions of the Project Team and provided a background on the Comprehensive Water Resources Management Process (CWRMP) process. The project is the result of a special procedure agreed to by the Department of Environmental Protection and Massachusetts Environmental Policy Act (DEP/MEPA) to conduct planning related to the wastewater needs of Acton and the construction of the Middle Fort Pond Brook sewer project.

Question and answer sessions are notated as follows: (Q = Question from Attendees; A = Answer from Project Team; C = Comment from Attendees; R = Response from Project Team)

Project Background – How did we get here?

Project Status – Where are we now?

Brent Reagor led a slide presentation regarding the history of the project and the status of the project (presentation is attached). The CWRMP Phase 1 report is complete. Phase 1 was comprised of identifying areas in need of wastewater disposal alternatives and identifying possible solutions for needs areas.

Q: One of the potential solutions is to institute wastewater management districts. How are these set up and how are they funded?

A: Wastewater management districts can take many forms, ranging from requirements to track septic system pumping to user-funded monitoring and control implemented by the town or a private contractor. The intent of the districts is to manage overall water quality of all water resources. The details of the plans have not been developed but the basic premise is to improve the control over wastewater disposal systems within the district.

Q: Was development potential a consideration? How much potential for development is there?

A: The “needs” are primarily based on developed lots. We looked at the limitations for wastewater disposal on all lots. As part of the process that matches needs with solutions, we will consider the potential wastewater flow for lots that may be developed within any area that may be served by offsite wastewater disposal.

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. Lots were generally undeveloped because they cannot support some requirement of Title 5 or building/zoning regulations.

Q: Is there environmental data to support the Needs Areas such as fecal coliform sampling or algal blooms?

A: The town has sampling locations throughout the community that have been in place long before the CWRMP and sewer system. The sampling data is factored into the CWRMP analysis but the majority of the data used in the hard analysis is from Board of Health records for onsite disposal systems.

Regulatory Update

Bob Rafferty led an update of regulatory issues. The intent of the project team is to submit an Environmental Notification Form and request a single Environmental Impact Report. The ENF can be submitted once the first phase of the hydrogeologic modeling is completed and the CAC finalizes its recommendations for solutions to each Needs Area.

Views from the Citizen's Advisory Committee

Art Gagne presented the perspective from the Citizens' Advisory Committee (CAC) and the Sewer Action Committee (SAC), which was active as part of the Middle Fort Pond Brook sewer system planning and construction. The following is a summary of his presentation.

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. Phosphorus is continually reduced to less than 0.2 parts per million. Greater than 1.0 MGD is possible in the sewer system as presently constructed and with expansion of processes at the WWTF. The SAC fully supports the work and findings of the CAC.

Disposal capacity is the limiting factor. The DEP controls discharge onto land at the existing sand beds or other locations such as on Adams Street on the other side of the WWTF or at the High Street well field. EPA controls discharges to the Assabet River.

The CAC has preliminary recommendations for construction of a new WWTF to serve the East Acton Village area with local groundwater discharge. The existing system should be expanded to serve the West Acton Village Area, in particular the Gates and Douglas schools.

Four main issues drive the decisions:

1. Environmental health and protection of water resources.
2. Economics analysis and support of economic development while maintaining the overall character of the community.
3. Diverse housing stock with opportunities provided through infrastructure improvements.
4. Aesthetic considerations, such as tree removal and construction of retaining walls to construct viable onsite systems.

Jane Ceraso presented as a CAC member and from the perspective as an authority on Acton's drinking water supplies as the Environmental Manager for the Acton Water District.

The State DEP requires the town to conduct this planning process as part of the special procedure outlined in its NPDES discharge permit. The study includes evaluation of wastewater, drinking water, and storm water systems.

One of the considerations is to find sites favorable for disposal of treated wastewater effluent. The soil characteristics are similar to soils favorable for drinking water wells. The Executive Office of Environmental Affairs (EOEA) issued a water assets report on its web site that projects a build-out water demand of 2.13 MGD. The Acton Water District is currently permitted to withdraw 1.95 MGD. The Town is faced with finding more water or better managing its use. Well operating septic systems and other treatment facilities that discharge treated wastewater effluent to the groundwater help to recharge the aquifers underlying Acton.

There is an interaction between quantity and quality of water. Quantity is an issue for withdrawal needs and quality is becoming an issue. The Health Department maintains and monitors wells, checking for nitrogen concentrations in the groundwater that could indicate problems. These were considered as part of the needs analysis.

The town should optimize the current wastewater collection system (use it to capacity) to address the needs near the existing system and to make good on the expectations set when the project was constructed. The town also has to think about keeping water local to maintain healthy aquifers. The EOECA Comprehensive Water Policy encourages treated wastewater reuse. However, the science and management of controlling reuse is still being developed. Keeping water local is a focus of many environmental groups.

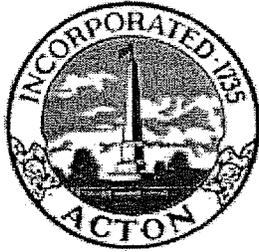
Questions and Answers:

- Q: Do we have to do anything - such as building wastewater facilities?
- A: The requirements of the study are to look at alternatives, one of which is to do nothing. This alternative has costs also, such as economic opportunity costs and environmental costs. The project evaluates these impacts and tries to determine the impact that doing nothing will have on the community. If this is the most feasible alternative given the decision criteria, then it will be recommended. But the findings to date show this to be unlikely for the Needs Areas. The solutions could be a mix of structural (constructed) solutions and nonstructural (such as management districts or bylaw amendment) solutions. There are no "needs" for the majority of the town, so the recommendation for these areas is to do nothing.
- C: This study should look at regulating development and growth and issues such as maintaining town character, etc.
- R: The purpose of the study is to assess wastewater disposal needs while factoring in water resources in a comprehensive manner, though secondary growth impacts and town character are criteria considered as they relate to evaluating wastewater solutions.
- C: This seems to be a wastewater study, but it is called as comprehensive water resources study.
- R: This scope of this report was negotiated with DEP to satisfy requirements for the WWTF permit. The guidelines for wastewater planning studies continually go through changes as more is known about the interaction of water resources. The scope of this study includes more evaluation of stormwater and drinking water quality and quantity than previous versions of standard wastewater plans.
- Q: If the soils are good for both wastewater disposal and drinking water wells, will disposal compromise the drinking water quality or affect the yield of the wells?
- A: Under current regulations, Title 5 provides control over onsite disposal systems, but it is difficult to identify and monitor failing systems before they become problems. It is better to monitor wastewater treatment proactively. With wastewater management districts and treatment facilities, the town can actively monitor and manage the effluent and better protect surface water and drinking water.
- Q: Will the choice of the Wetherbee site change the use of the site? It has a conservation restriction.
- A: This is a consideration in the final evaluation. Any disposal facility would be subsurface so that the use can continue as farmland.
- Q: Why treat the Adams Street discharge to such low levels of phosphorus?

- A: Phosphorus is a major issue in the Assabet River, even though the WWTF discharges to sand beds and not directly to the river. WWTF's along the Assabet are facing more stringent limits on nutrient discharges.
- Q: How is the water withdrawal limit of 1.93 million gallons per day related to safe limits for what we could actually pump?
- A: The limit is based on a safe level of withdrawal.
- Q: Spencer Road should be part of the sewer district because of wetlands, flooding, and high groundwater. Is there specific data on groundwater levels?
- A: We have some actual data on groundwater levels through town. Other data is based on interpolation of groundwater contours. These concerns are part of the needs analysis.
- Q: Should combine septic system needs with flooding issues. Can groundwater levels be controlled?
- A: Controlling groundwater levels is very difficult, especially on a large scale, but there may be some limited ability in specific small areas.
- C: The CWRMP process needs stronger outreach and publicity especially during the public comment period, such as advertising for meetings and updates on the progress. There should be a public advertisement that the CAC is evaluating wastewater solutions and not exclusively planning for sewers. *The Beacon* would be a good outlet for press releases and announcements.
- R: The CAC will submit press releases and announcements to local newspapers.
- Q: Does the CWRMP include smart growth principals. Many people may believe that the best direction for Acton is to limit growth.
- A: The CWRMP is consistent with the village plans, the Town's master plan, and open space plans.
- C: The CWRMP and the CAC meeting minutes are not very accessible. Can the information be put on the Town's web sit?
- A: Copies of the CWRMP are available at the Health Department and the library. The project team will post the CWRMP on the web site if it is technically feasible; it is a very large file. CAC meeting minutes will be posted on the web site also.

Next Steps

- The project team will finalize the first phase of the hydrogeologic study at Wetherbee Street, Quarry Road, High Street, and Adams Street after receiving approval of the scope of work from DEP.
- Pending the results of the study, the project team will move forward with the Environmental Notification Form (ENF) to start the MEPA review process.
- Meeting minutes and reports will be posted on the Town's web site.
- The Project Team and CAC will draft a press release to issue to local newspapers.



Town of Acton

PUBLIC INFORMATION MEETING

Comprehensive Water Resources Management Plan /
Environmental Impact Report
CWRMP/EIR
Tuesday November 16, 2004
7:00 PM

TOWN HALL

Meeting Goals:

Present the CWRMP: the goals, the history, the progress, and the plan for the future.

Educate and inform.

Receive input and advice from the citizens of Acton.

Moderator: *Doug Halley, Public Health Director*

Agenda:

- | | | |
|--|--------------|--------|
| • Welcome | Doug Halley | 5 min |
| • Project Background - How did we get here? | Doug Halley | 10 min |
| • Project Status – Where are we now? | Brent Reagor | 10 min |
| • Regulatory Update | Dan Garson | 5 min |
| • Views from the Citizens Advisory Committee | | |
| Tentatively Scheduled to Speak → | Art Gagne | 5 min |
| | Jane Ceraso | 5 min |
| • Q&A | Doug Halley | 30 min |
| • Next Steps | Bob Rafferty | 10 min |
| • Closing Remarks | Doug Halley | 5 min |
-

Report of the Citizens' Advisory Committee

Who are we?

The Citizens' Advisory Committee (CAC) was formed in 2000 as a facilitated discussion group to guide the direction of the Acton Comprehensive Water Resources Management Plan / Environmental Impact Report.

Where are we now?

We have finished the Phase I report. The Committee, with the help of Woodard and Curran and staff from the Health Department, has worked to identify locations that will probably need an alternative to standard on-site wastewater disposal and linked these challenges to potential solutions. (This took several committee meetings)

Areas were identified as "Needs Areas" based on where:

- There are increasing septic failures
- Poor soils do not allow for proper treatment of wastewater
- Wetlands, flood plains and valuable environmental sites encroach on septic systems
- Small lots would not allow for compliant septic systems to be built

The potential solutions include:

- Individual on-site wastewater systems, including innovative/alternative technologies
- Cluster (neighborhood) systems / Package plants
- Decentralized (Satellite) treatment and disposal systems
- Centralized solutions, including connection to the existing wastewater system
- Wastewater management districts

In addition to the existing sewer system, sites have been selected for the potential to treat and dispose of the treated wastewater.

At the last CAC meeting the committee voted to investigate the following sites:

- Increasing the discharge to the current disposal field and expanding the disposal field at the Adams Street Treatment Plant
- Recharging the Acton Water District Wellfields on High Street
- Constructing a decentralized treatment and disposal facility on Wetherbee Street land currently owned by the Town at Route 2

The project will also include, if budget allows, an investigation of a possible disposal location in North Acton, behind NARA.

One of the final requirements of Phase I is a public meeting where the progress of the CAC is presented, with possible solutions for those identified needs areas.

Since information from Acton's Board of Health was so complete, the consultants have already started on aspects of Phase II and are now asking the DEP if the two stages can be telescoped into one.

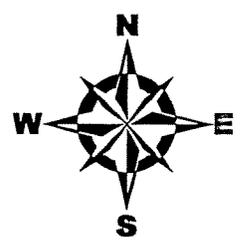
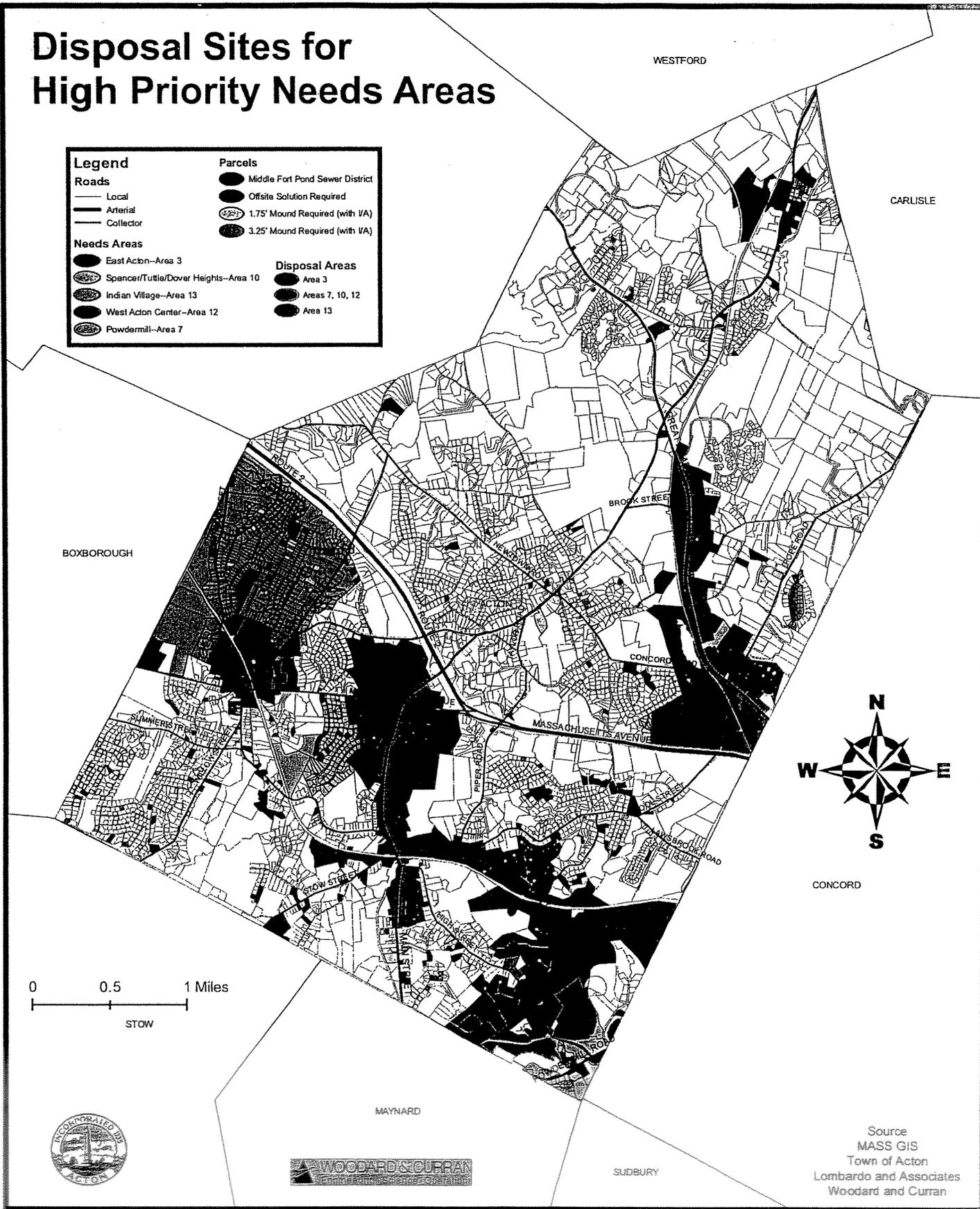
Where we go from here?

There are several actions that are happening simultaneously:

- Petitioning the DEP to combine Phases II and III
- Investigating the three disposal sites voted by the committee
- Evaluating the alternative collection and treatment technologies, and the feasibility of the solutions
- Developing the parameters of a wastewater management district

Disposal Sites for High Priority Needs Areas

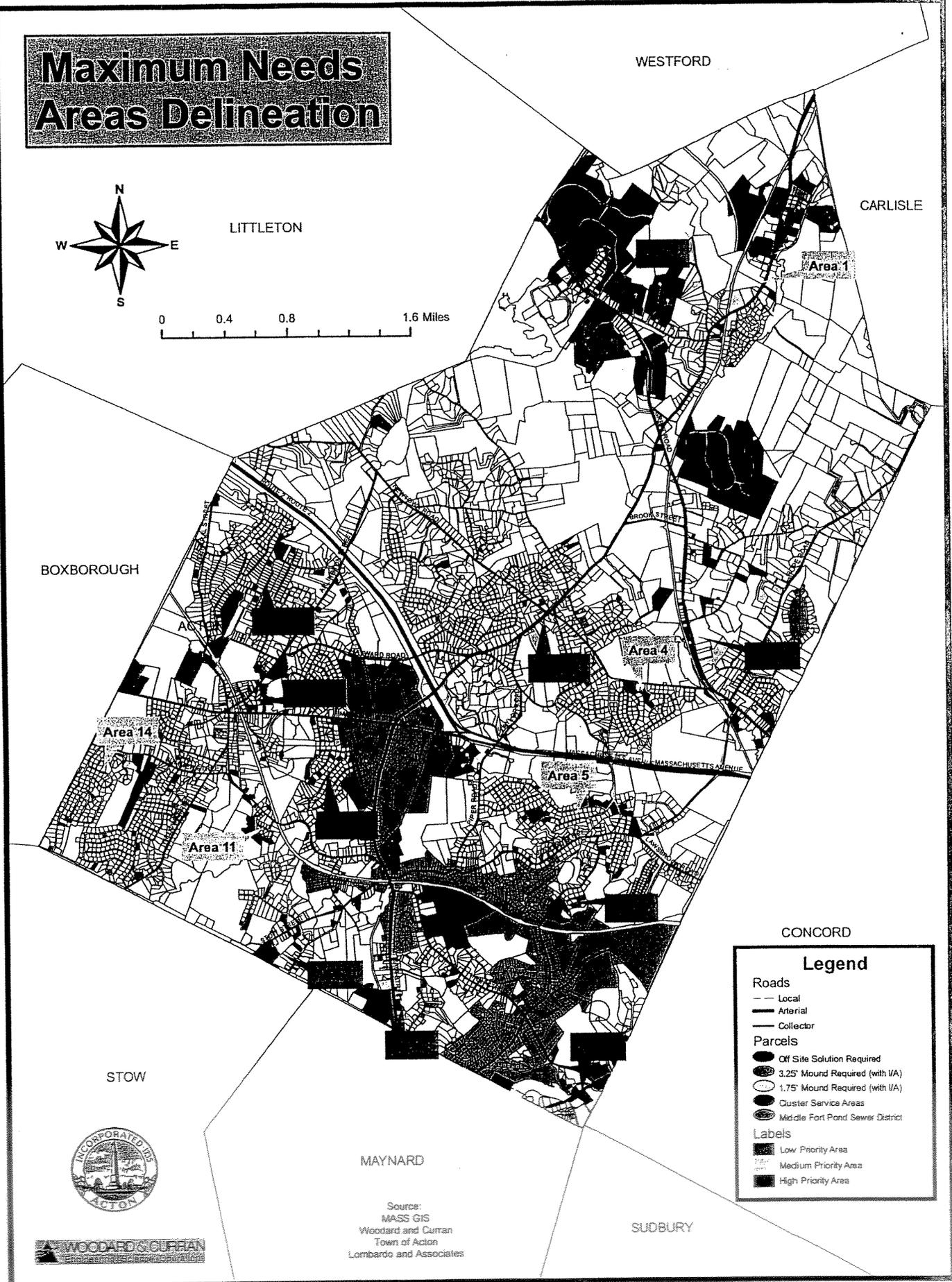
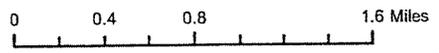
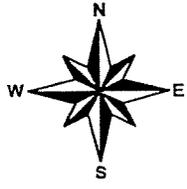
Legend	
Roads	
Local	
Arterial	
Collector	
Needs Areas	
East Acton--Area 3	
Spencer/Tuttle/Dover Heights--Area 10	
Indian Village--Area 13	
West Acton Center--Area 12	
Powdermill--Area 7	
Parcels	
Middle Fort Pond Sewer District	
Offsite Solution Required	
1.75' Mound Required (with VA)	
3.25' Mound Required (with VA)	
Disposal Areas	
Area 3	
Areas 7, 10, 12	
Area 13	



CONCORD

Source
 MASS GIS
 Town of Acton
 Lombardo and Associates
 Woodard and Curran

Maximum Needs Areas Delineation



Legend

Roads

- Local
- Arterial
- Collector

Parcels

- Off Site Solution Required
- 3.25' Mound Required (with I/A)
- 1.75' Mound Required (with I/A)
- Cluster Service Areas
- Middle Fort Pond Sewer District

Labels

- Low Priority Area
- Medium Priority Area
- High Priority Area



Source:
 MASS GIS
 Woodard and Curran
 Town of Acton
 Lambardo and Associates

High Priority Needs Planning Areas

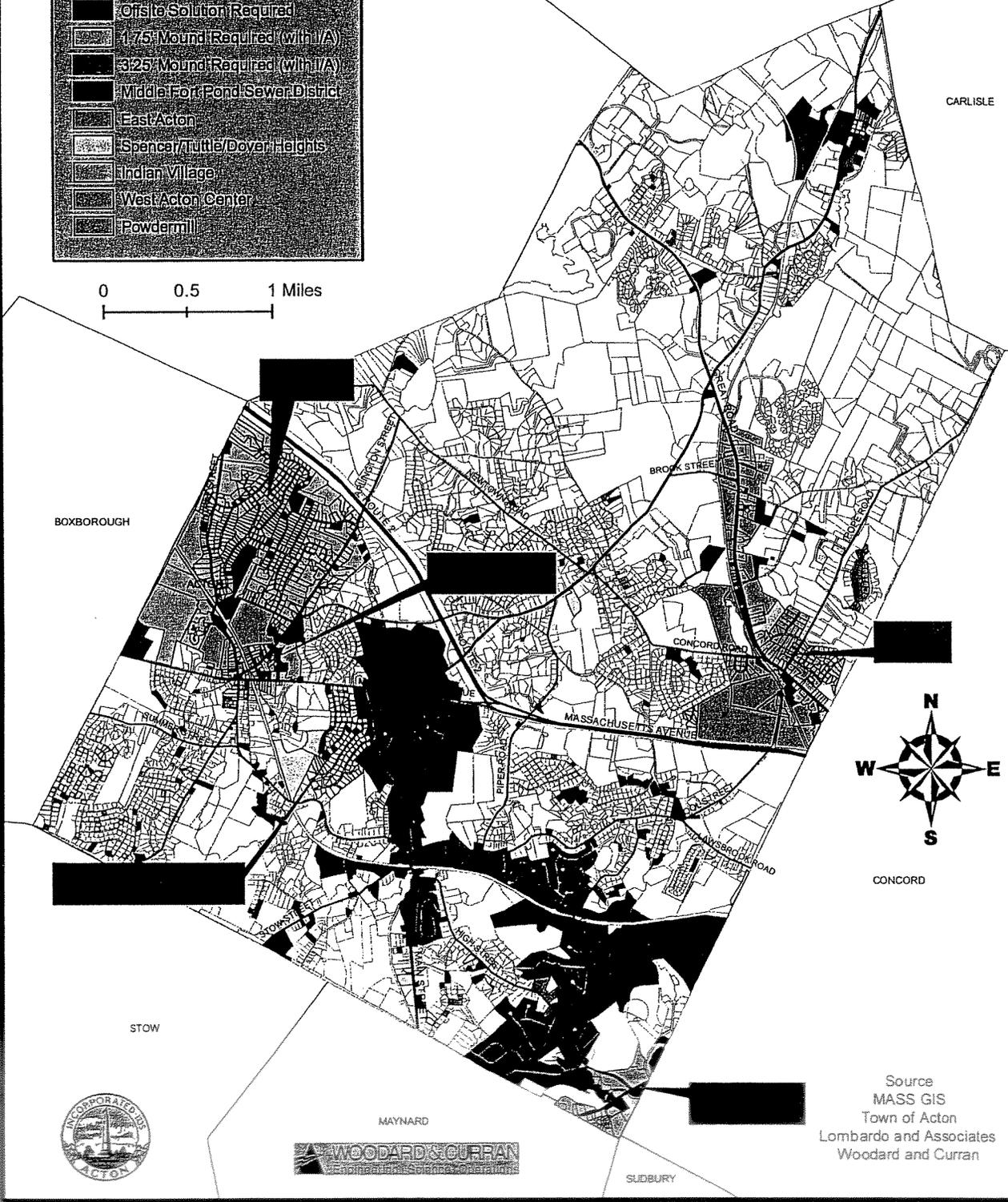
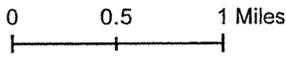
Legend

Roads

- Local
- Arterial
- Collector

Parcels

- Offsite Solution Required
- 1-75' Mound Required (with I/A)
- 3-25' Mound Required (with I/A)
- Middle For Pond Sewer District
- East Acton
- Spencer/Huttle/Dover Heights
- Indian Village
- West Acton Center
- Powdermill



Source
 MASS GIS
 Town of Acton
 Lombardo and Associates
 Woodard and Curran



Where Are We Now?

Status of the Acton CWRMP

Brent Reagor, RS
Environmental Health Specialist
Acton Health Department

B. Reagor 11/16/2004

Phase I is Complete

What was Phase I?

- Identifying Needs Areas
 - Total of 15 Identified
 - Needs Areas were Ranked in Order of Priority
- Identifying Possible Solutions for Needs Areas

B. Reagor 11/16/2004

What is a Needs Area?

A grouping of parcels that have a "NEED" for a wastewater disposal solution other than their current onsite wastewater (septic) system.

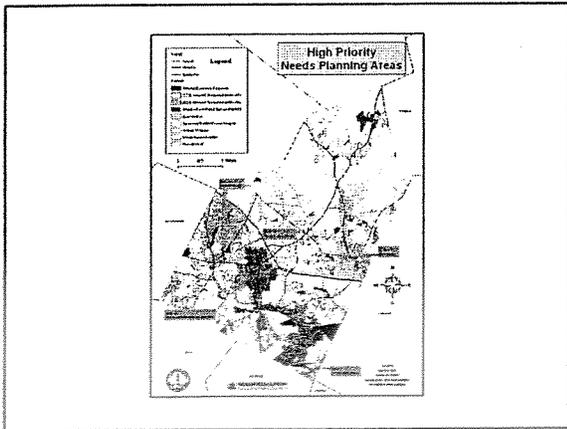
B. Reagor 11/16/2004

What Determines Need?

- High number of prematurely failed systems
- Poor soils that do not allow for proper treatment of wastewater
- Wetlands, flood plains, and environmentally sensitive areas that encroach on land available for onsite systems
- Small lots that do not allow for compliant systems to be built
- Aesthetic and environmental impacts of mounded systems
- High groundwater elevations, requiring mounded systems greater than 1.75' in height above the existing ground elevations

B. Reager 11/16/2004

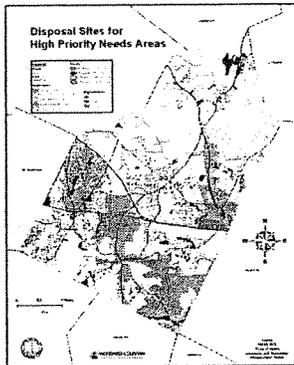




What Are The Possible Solutions?

- Retain current onsite systems, possibly require additional treatment of the wastewater
- Cluster systems (neighborhood sized or smaller) with “package” treatment facilities
- Large scale cluster systems with satellite treatment facilities
- Construction of a new “Decentralized” sewer system with a treatment facility
- Expansion of the existing sewer system
- Wastewater management districts

B. Reagor 11/16/2004

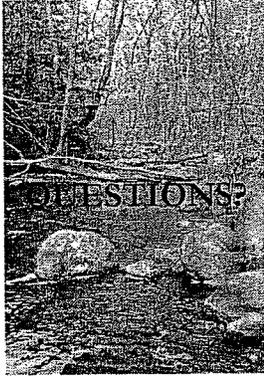


Phase I is Complete

What was Phase I?

- Identifying Needs Areas
 - Total of 15 Identified
 - Needs Areas were Ranked in Order of Priority
- Identifying Possible Solutions for Needs Areas
 - Solutions vary from:
 - Keeping Onsite Wastewater Systems to
 - New Sewer Construction

B. Reagor 11/16/2004



B. Reagor 1/11/2004



TOWN OF ACTON
472 Main Street
Acton, Massachusetts, 01720
Telephone (978) 264-9634
Fax (978) 264-9630

**Comprehensive Water Resources Management Plan
Citizens' Advisory Committee
Committee Member Application**

Name: _____

Address: _____

Phone Numbers: _____ Email Address: _____

Home: _____

Work: _____

Occupational Field (optional) : _____

Please answer the following questions:

- 1) What two environmental issues are most important to you as they relate to water and wastewater resources in Acton?

- 2) What two economic issues are most important to you as they relate to water and wastewater resources in Acton?

- 3) What goals would you like the Comprehensive Water Resources Management Plan to accomplish?

- 4) What do you see as the most important communication issue(s) associated with the Comprehensive Water Resources Management Plan?

- 5) Do you represent a specific Board, Committee or other interested party? If so, which one?

- 6) Are you available for monthly and/or quarterly night meetings?

Any additional comments?

Please return this form to the Acton Board of Health Office no later than November 22, 2004.

Town of Acton

ACTON WASTEWATER CITIZENS ADVISORY COMMITTEE

Comprehensive Water Resources Management Plan /

Environmental Impact Report

CWRMP/EIR

Thursday, September 16, 2004

7:00 PM

ACTON TOWN HALL, ROOM 204

Meeting Goals:

Review the comments from MEPA and other interested parties

Update on progress towards Phase II/III

Agenda:

- | | | |
|------------------------|--------------|--------|
| • Welcome | Doug Halley | 5 min |
| • Introductions | All | 5 min |
| • MEPA update | Bob Rafferty | 10 min |
| • Discussion | All | 60 min |
| • Next Steps | Bob Rafferty | 5 min |
| • Evaluate the Meeting | All | 5 min |



Meeting Minutes

Acton Wastewater Citizens Advisory Committee

Meeting Date: Thursday, September 16, 2004

Meeting Place: Room 204, Acton Town Hall

Attendees: Brent Reagor—Acton Health Department
Bob Rafferty—Woodard and Curran
Ann Chang
Art Gagne'
Helen Probst
Tony Capobianco
Mary Michelman
Eric Hilfer
Pat Cummings
Jane Ceraso

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Acton Health Department, Acton, Massachusetts Attn: Brent Reagor, breagor@acton-ma.gov

ATTACHED ITEMS

Agenda cover sheet
EOEA Secretary's Certificate

The meeting was called to order at 7:45pm.

Mr. Reagor (BR) opened the meeting with a short discussion of the EOEA Secretary's Certificate comments on the Phase I submittal. The meeting would follow the format of the comments, addressing each section: Wastewater, Groundwater, and Historic Resources in order.

Wastewater

EOEA has requested a further examination of facilities with design flows greater than 10,000 gpd in the Zone II's or Interim Wellhead Protection Areas. Three facilities were named: Dover Heights, Strawberry Hill, and Woodvale; but Woodvale should be deleted from that list because they have a WWTP.

EOEA is specifically mentioning the Douglas and Gates Schools in West Acton and following the aggregation of flows regulation within Title 5.

Ann Chang (AC) – The two schools could be considered part of the West Acton Center planning area and not the Indian Village planning area.

Helen Probst (HP) – This statement in the Certificate from EOEA should bump the priority of this area to #1.

Art Gagne' (AG) – Dover Heights could also be included with the West Acton Center planning area.

A question was raised regarding Area 12, as a possible disposal site for wastewater from West Acton Center, on the possible disposal location maps. Mr. Reagor stated that this area has now been disqualified due to flood plain, wetlands, and high groundwater issues.

Mary Michelman (MM) asked whether a Notice of Noncompliance could be issued to the schools at any time for the wastewater flows. BR answered "yes" and that DEP has been asking about the Gates and Douglas schools for a while now.

MM then asked about the total Title 5 design flows for the areas between West Acton Center and the existing sewer system.

BR – Spencer, Tuttle, Flint and Dover Heights = 66,265 gpd
West Acton Center = 80,000 (this includes the 2 elementary schools)

AC – When bringing sewer from West Acton to the existing system, we may need to pick up areas like the Nash and Downey Road subdivision.

Jane Ceraso (JC) – mentioned a parcel behind the playground in West Acton Center that may have potential for disposal location.

BR then gave a background of the existing sewer system capacity and the requested changes that Acton is currently pursuing during the renewal process for its Groundwater Discharge Permit. This includes the recognition of 65,000 gpd of extra capacity under the existing permitted limit of 250,000 gpd and an increase in the permitted disposal rates to 300,000 gpd. This is based on studies conducted by the Health Department and Woodard and Curran.

MM was concerned about base flow recharge to area streams and wanted the solutions to be needs driven, not just sewerage because we can.

AC and BR both stated that when you run a sewer line past a property there is a political, financial and legal obligation to provide sewer service to that property.

AG questioned the quality of the base flow recharge water as many septic systems are discharging to the groundwater

JC mentioned a study conducted by DEM and USGS for a groundwater model in the Assabet basin. It may prove helpful as we move forward.

AG and BR both pointed out that the current WWTP is producing higher quality effluent than originally advertised. A sample passed EPA primary and secondary standards back in August of 2003.

An agreement was reached by the CAC that the first priority for a solution should be the area that includes West Acton Center; Spencer, Tuttle, Flint Roads, and Dover Heights; and the Gates and Douglas Schools.

Groundwater

This discussion was to determine the ranking of sites for investigation for future wastewater disposal.

BR stated the CAC needed to come out of tonight's meeting with a ranking of the sites from 1-4. The sites are: Adams Street, Assabet Wellfield, Wetherbee Street land, Town land above NARA, and the School Street wellfields.

BR -- The Assabet wellfield site would use indirect potable reuse by discharging into the Zone II of the water supply wells.

JC mentioned that the Assabet wellfield is the most transmissive aquifer in Town.

BR – The Wetherbee street site would be used for an East Acton solution along Route 2A. Soils maps show an area that could potentially handle 300 – 350,000 gpd of wastewater flow. There is a USGS well very near the site that can provide significant information about groundwater levels.

MM asked about the plume from the landfill and AC stated it was not an issue as it does not pass near this property.

MM was concerned about the need for sewers in East Acton.

BR stated there are at least 5 large septic systems on Route 2A that are in some level of failure and are endangering the groundwater in the area.

MM wanted to consider the Adams street site separate from the Assabet Wellfield. BR stated there is some additional room on the Adams St. property for additional disposal beds, but not sure how much.

BR then went on to give a short summary of indirect potable reuse projects in the US. Most are on the West Coast and are using a variety of methods to treat the wastewater and recharge the aquifers.

The CAC agreed to delete the School Street wellfields from the list of sites to investigate as they are in close proximity to the Wetherbee Street site and any discharge here might affect the Grace plume.

The sites for investigation were ranked by the CAC:

- 1) Adams Street/ Assabet Wellfield

- 2) Wetherbee Street site
- 3) Town land above NARA

MM had a concern that we don't just build sewers to help developers.

HP mentioned the Route 2 Rotary revisions and the possible impacts it may have on disposal at the Wetherbee Street site.

BR explained the capacities of the existing sewer collection system, WWTP and disposal site versus the permitted disposal capacity.

Eric Hilfer (EH) stated that public education about possible reuse at the Assabet wellfields should begin as soon as possible. JC echoed those comments.

BR mentioned the comprehensive program the City of San Diego developed to get its customers to accept reuse.

MM wanted a summary of all available information in reuse.

Bob Rafferty mentioned that all of this should wait until we determine if the Zone II discharge is even possible.

BR mentioned that Acton may have to perform a Health Risk Assessment of wastewater discharge to a wellfield if we go down that path.

JC liked that idea and likened it to a pilot study.

The meeting adjourned at 9:15pm

Bob Rafferty

From: Tavernier [ntavern@comcast.net]
Sent: Wednesday, September 01, 2004 10:34 AM
To: Brent Reagor; Walter Foster (office); Ann Chang; Art Gagne; Bill McInnis; Eric Hilfer; Helen Priola; Helen Probst; James Shope; Jane Ceraso; Joan Lastovica; Kathleen Doran Boyle; Lauren Rosenzweig; Len Rappoli; Pat Cummings; Tony Capobianco; Trey Shupert; Stacy Rogers (home); Carol Holley; MSMichelman@cs.com; Bob Johnson; Doug Halley; Bob Rafferty; Bob Rafferty; Nancy Tavernier
Cc: bos@acton-ma.gov
Subject: CAC statement from Ann Chang, Art Gagne and Nancy Tavernier

TO: Citizens' Advisory Committee, CWRMP
FROM: 3 Members of CAC:
Ann Chang <ann.chang@verizon.net>,
Art Gagne <wag1sg@rcn.com>,
Nancy Tavernier <ntavern@comcast.net>
SUBJECT: Thoughts on the CWRMP
DATE: September 1, 2004

As former long time Sewer Action Committee members and current Citizens' Advisory Committee members, we would like to put forth a statement about our collective thinking on the direction we think the CWRMP should take. These comments are consistent with the points that we make at every CAC meeting. We think it might be helpful if we put them in writing to explain our perspective on Acton's ongoing wastewater disposal problems in preparation for the next CAC meeting on September 16.

These are our opinions on some of the broader issues relating to the Comprehensive Wastewater Resources Management Plan (CWRMP) currently underway in Acton. Some of us have been working on sewer issues since the mid-1980's and have taken an active role in the political and technical challenge of bringing the first municipal sewer system to the Town of Acton, 50 years after it was first identified as a critical need.

We support the efforts to add properties to the current Sewer District because, when it was designed, the treatment plant, the pump stations, and the collection systems were built for an increased capacity knowing that the need for expansion was great. Having the capability of adding more treatment units, at some point in the future, would increase the capacity to handle an expanded sewer district at a lesser overall cost. The costs to provide expansion capability are being paid for by the Acton tax payers as part of the public share of the project cost, rather than solely through the assessments to the users. The final Middle Fort Pond District was reduced from the original design because the discharge area was restricted by the DEP which in turn reduced the volume of sewage that could be treated. We think using this existing infrastructure for future expansion is a sound economic move and one that the taxpayers understood and supported.

The original plant was designed to treat approximately 500K gallons per day (gpd) of wastewater for discharge to a groundwater discharge system also located on Adams Street, open sand beds. This was the design and construction objective. However, during the planning process, DEP approved a limit of only 250K gpd due to concerns of the proximity to the Assabet River.

The current flow of wastewater into the treatment plant is 100K gpd. Therefore, our present Adams Street treatment facility, without any new expansion construction, is physically capable of handling up to 150K more gpd. This includes approximately 60K gpd of unconnected properties within the current Sewer District. An enlarged treatment plant on Adams Street with two additional treatment units would expand the treatment capacity to 1.2+ million gpd. This could easily handle West Acton Center at an estimated 68k gpd, and an expanded area around Indian Village

estimated at 300k gpd which includes the two elementary schools.

We think multiple discharge points should be investigated in the CWRMP. These points could initially be: increased disposal into the existing open sand beds on Adams St., the Zone 2 well field off High St., and surface water such as the Assabet River. All three of these locations in South Acton would allow the flow to pass through the treatment plant first before discharging the treated water. Acton has demonstrated that it can responsibly treat its effluent to a level far more advanced than any other treatment facility on the river.

In addition to expansion options for the Adams Street treatment plant there is another feasible sewer project that we support, East Acton Village. There are numerous reasons for an East Acton Village (EAV) project, several are listed below. In addition to those, is the willingness of EAV commercial property owners to aggressively pursue this option. A separate wastewater treatment plant could be constructed in the EAV area with a groundwater discharge system located on town-owned property on Wetherbee Street in East Acton. This system has the potential for handling a significant amount of East Acton area sewage.

The broader issues being addressed herein to support our position are:

- (1) Environment/health;
- (2) Economics;
- (3) Diverse housing opportunities; and
- (4) Esthetics.

Comments pertinent to each issue are listed below under each heading.

(1) Environment/Health

Throughout the 50 years of study of Acton's wastewater disposal problems, environmental impact has always been a prime consideration. There have been occasions when volunteers found E.coli bacteria in the storm drains in South Acton and raw sewage running in Kelley's Corner. These more egregious problems have now been corrected by sewerage those areas.

However, as the study has already shown, there are many parts of town with failing septic systems or soils that are not conducive to proper disposal. What is happening to the effluent being discharged into the ground from these systems? We think it is just as important to worry about the damage being done to the watershed by improper sub-surface disposal as it is to worry about what the impact would be to the Assabet River should Acton be allowed to discharge into it.

(2) Economics

When sewers were finally voted in 1998, some of the district owners were very upset at the projected betterment cost of \$15,000. We too were saddened to think that due to lack of political courage in the 80's, the Town now had to assume 100% of the cost of a sewer system when in 1985, it could have had 70% of the cost paid by the state and federal government. Those residents who are now sewerage are very lucky indeed, they have a permanent system for a fixed amount of money and they can pay it off over a 30 year period. Those residents with septic systems continue to pay for replacement, repair, and maintenance of their on-site systems at great financial impact in some cases. One home owner in Indian Village paid \$45,000 to replace her system just so she could sell her tiny 3 BR ranch house. The average replacement cost is now in the \$25,000+ range. None of these costs are allowed a 30 year pay back period. Sewers would be much cheaper to many if not most households in the town. Many of these failing systems are in older homes occupied by families on fixed incomes unable to absorb this major expenditure.

Another important economic consideration is Commercial Development. Acton's Master Plan Update calls for an increase in the

commercial and industrial tax base but without the required infrastructure in place like sewers, there is little development that can occur. Sewers would allow an increase in commercial and industrial development which would help take the burden off the residential taxpayers. Sewering the village areas such as West Acton and East Acton would allow the Village Plans to be implemented bringing new businesses, restaurants, even a Laundromat to the town.

(3) Diverse Housing Opportunities

While not the most popular topic in Acton, there is a severe need for more diversity in housing. A recently completed Housing Plan has identified the critical need for affordable as well as below market housing. Much of this could be provided through multi-family dwellings, accessory apartments, and residential units over commercial establishments in the village areas. Little new development is possible without access to sewers. The Growth Centers identified in the Master Plan will never become a reality without the infrastructure to help them grow the way the Town has envisioned it and voted.

(4) Esthetics

In and of itself, esthetics is not the most important reason to have sewers in lieu of septic systems but to those who have watched their properties be destroyed, those who have lost the use of major parts of their yards, and those who have to look at unsightly mounds, it is very important to them. A property that was formerly treed and landscaped has far more value than the property with the inevitable mound and perhaps also with an ugly retaining wall. The stripping of the lots and blasting of the ledge is very destructive to the environment and cannot help but devalue these properties.

The CAC was formed in 2002 after a Town Meeting vote to fund the CWRMP for \$500,000. At that time the retiring members of the Sewer Action Committee were asked if they wanted to join the CAC. At least six members agreed to serve. At the same time all the relevant town boards and committees were asked to appoint a member. There were newspaper articles requesting members from the Town at large. There were efforts to get specific areas of the Town covered by members as well as people who were in the current sewer district. At our first meeting there were 16 people present and all were assured that there would be no more than four meetings a year.

Perhaps the long introductory preparation for CWRMP and the elongated period between meetings during Phase I caused some earlier participants to lose interest or for some other reason became non-participants. Whatever the cause, we suggest that if additional and broader membership is now desirable that the CAC recommend to the BOS that it undertake a new recruitment program to obtain new members or contact former participants to rejoin the CAC to ensure a broad cross section of opinion. We further recommend that the total membership of the CAC be held to a reasonable number, such as twenty to twenty-five, for obvious reasons of efficiency and effectiveness.

We felt it was important to share our vision for the Town with members of the CAC, many of whom have not been directly involved in these issues in the past. We hope you find this helpful.

35 New England Business Center
Suite 180
Andover, Massachusetts 01810

Tel. 978-557-8150
Fax: 978-557-7948
mail@woodardcurran.com
http://www.woodardcurran.com

MEETING DATE: July 15, 2004

REFERENCE: Acton CWRMP
CAC Meeting

ATTENDEES: CAC:
Jane Ceraso – Acton Water District
Ann Chang – CAC / SAC
Nancy Tavernier – CAC / SAC
Art Gagne – CAC / SAC
Bob Johnson – BOS
Pat Cumings – resident
Helen Probst – resident
Eric Hilfer - ACES
Stacy Rogers – Assoc Planning Board
Paulina Knibbe – LWV
Doug Halley – Health Director
Brent Reagor – Health Dept
Helen Gordon - Woodard & Curran
Bob Rafferty – Woodard & Curran

DISTRIBUTION: Attendees
Dan Garson
File

Submitted by: Robert Rafferty, P.E.

The following meeting minutes have been interpreted to the best of the writer's understanding with respect to topics discussed. A copy of these minutes has been sent to the attendees for their review and information. Additions and/or corrections are invited and will be made a matter of record. Mail, email, or fax additions/corrections to Woodard & Curran, Inc. Andover Massachusetts, Attn: Bob Rafferty. brafferty@woodardcurran.com

ATTACHED ITEMS

Agenda cover sheet

AGENDA ITEMS

A project update was presented along with goals of CAC meeting. Helen Gordon presented the status since the last CAC meeting, including the MEPA schedule. CWRMP has been submitted for public

review. MEPA review period ends on July 23, 2004, with another seven days for the Secretary's Certificate.

Bob Rafferty led the discussion regarding needs criteria. The CAC was asked to review the handout distributed prior to the meeting and be prepared to rank the criteria used to establish the needs areas and potential solutions. The CAC reviewed the tables presented in the handout.

- Table 1: Criteria for Technical Assessment
- Table 2: Criteria for Needs Areas and Disposal Site Evaluation
- Table 3: Needs Evaluation / Solutions Evaluation Criteria

DISCUSSION ITEMS

Criteria listed in the tables were reviewed. The CAC agreed that the technical criteria are of equal rank, but some "non-technical" criteria are more important than others. Non-technical criteria important to the CAC include implementability, economic growth in areas designated for growth, optimization of the current wastewater infrastructure and wastewater treatment facility (WWTF), and reuse/recharge of groundwater/aquifers.

- **Implementability** includes ease of technical solution, probability of permitting, political considerations such as addressing the initial expanded sewer district and local resident perceptions.
- **Economic growth** areas include West Acton Center and East Acton along Route 2A.
- **Optimization** of the current wastewater infrastructure and treatment facility means making as many connections as possible to fully use the pipelines, pump stations and treatment facility to achieve an economy of scale from using the entire system. Additional sewerage would be conducted according to the needs areas as the priority, but fairness plays a role. Develop service areas to link to lots that actually need a solution, do not conveniently connect contiguous properties while leaving out a nearby needs area, even if the cost is more.
- **Reuse/recharge** includes finding disposal locations within Acton to recharge the local aquifer instead of seeking a surface water discharge from the treatment facility. The existing infrastructure and facility could be used in conjunction with subsurface discharge locations located some distance from the facility. Other satellite treatment and disposal systems could be located in areas that may recharge drinking water aquifers if it is not feasible to connect to the existing system. Wastewater effluent discharge in Zone IIs was discussed at length.

Comments from the CAC regarding the ranking of criteria and service areas, and selection of disposal alternatives, included:

(Q = Question from CAC; A = Answer from Project Team; C = Comment from CAC; R = Response from Project Team.)

- C: A general approach may be to evaluate the capacity of the existing wastewater infrastructure and WWTF and then look at high priority areas that could be solved by connecting to the existing system.
- R: To completely serve the high priority service areas listed in the handout Table 3 would require additional treatment and discharge capacity at the wastewater treatment facility. This may include a surface water discharge to the Assabet River.

Meeting Summary

Meeting Date: July 15, 2004

Page 3 of 5

- C: There seems to be an assumption that there is no net loss to the aquifer by sewerage because the sewerage 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 as an alternative for satellite treatment systems.
- C: The Adams Street WWTF could still be used to treat wastewater but the discharge could be pumped to a location that can recharge the groundwater instead of discharging to the Assabet River.
- C: The intent is to address the needs areas and determine the best place to discharge the treated wastewater. Wellfields may be good alternatives.
- R: This is acknowledged as an alternative.
- Q: Why is Area 2 not more highly ranked if private facilities are in noncompliance?
- A: Some of the noncompliance issues are being addressed by the private owners. One project ongoing is the Woodlands at Laurel Hills, where a WWTF may be constructed in Westford to serve new development partially in Acton. To link the Area 2 service area to Area 1 and the local disposal location near NARA would probably require construction through conservation land.
- Q: How much capacity exists at the wastewater treatment facility on Adams Street?
- A: Approximately 60,000 gallons per day (gpd) according to current wastewater flows. This will be reduced if the sewer is extended to the Powdermill Plaza area.
- Q: The service areas presented in the handout figures differ from the sample areas presented at the last CAC in June. How do you define service areas?
- A: The areas presented for discussion reflect a possible alternative as part of the overall discussion of alternatives. These areas show the entire neighborhoods that may be included and are therefore larger than the service areas shown in the figures. The service areas on the handout figures reflect the most logical minimal areas that include the specific needs areas. The final service areas will depend on the relative ranking of needs criteria, and the availability of disposal options and management alternatives.

Several service areas were designated as priority areas by various members of the CAC. Prioritized service areas are discussed below.

Powdermill (Area 7):

- C: Economic growth is a major factor in this area. It should be connected to the existing sewer system.
- R: Powdermill is being investigated for connection to the existing sewer system. The process is already underway.

Audubon Hill (Area 8b)

- C: Audubon Hill can be connected to the existing sewer system

West Acton Center (Area 12), Spencer Road Area (Area 10a), Dover Heights (Area 10b),

- C: The area between West Acton and the existing sewer district was included in the original expanded sewer district, and these should be served to fully utilize the infrastructure and treatment facility.
- Q: Is it possible to put pipes on the side of the road and combine with sidewalk construction to make it safer to walk on a busy road?
- A: Yes, linking beneficial uses is a good idea.
- C: A force main may work between Flint and West Acton because there is not much development.
- C: Could run a pipe along Central Street to West Acton, which could also serve Nash/Downey (Area 11).

East Acton (Area 3)

- C: There is probably political and local backing to sewer Area 3 for economic growth. Combining East Acton (Area 3) with Poets Corner/Robbins Park (Area 4) may make sense.
- R: These service areas would require a treatment and disposal facility. A potential disposal site is located on Wetherbee Road on Route 2.

Indian Village (Area 13)

- C: Extending sewer past West Acton to Indian Village to address primarily aesthetic concerns only makes sense if the cost isn't too great.
- R: The final boundaries of service areas are dependent on the availability of alternatives for disposal of treated wastewater. There may not be suitable infrastructure, facilities, or disposal locations to extend the sewer throughout the entire area. The site investigation phase will provide better answers.
- Q: Can the potential disposal site located in the area provide an alternative?
- A: A small privately owned parcel located near West Acton may provide some amount of wastewater effluent disposal. However, it will probably not provide a complete solution.

Brucewood Estates (Area 5)

- Q: This has some of the same criteria as Indian Village. Why is it ranked as a medium priority?
- A: Two potential disposal sites are located near this area, the auto auction property and Acton Water District property near the School Street well field, which is located within the Zone II. Initially, the disposal sites were deemed to be less than desirable. However, based on CAC comments the School Street site will be investigated as part of the next phase.

CONSENSUS ACTION ITEMS

- Evaluate likelihood of discharge into an approved Zone II. Research where this is being done within Massachusetts.
- While the priority areas should focus on optimizing the existing WWTF, a parallel effort should be to move forward with plans for East Acton, which would be separate from the existing wastewater system.
- High priority areas are:
 - Powdermill (Area 7)
 - Audubon Hill (Area 8b)
 - West Acton (Area 12)

Meeting Summary

Meeting Date: July 15, 2004

Page 5 of 5

- East Acton (Area 3)
- Dover Heights & Spencer Road (Area 10)
- Brucewood Estates (Area 5)
- Indian Village (Area 13) and Nash/Downey (Area 11)
- Disposal sites identified for further investigation include:
 - Area 1 – North Acton near NARA
 - Area 3 – Wetherbee Street near Route 2
 - Area 5 – School Street (Zone II)
 - A privately owned parcel near the Assabet wellfield may be included.



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

CAC Meeting – July 15, 2004

The CWRMP's first phase, which includes an assessment of the current environmental conditions in and around Acton, is complete with the submittal of the Phase 1 report to MEPA to begin the process for public review. The second phase has begun with the kick-off meeting with the CAC held on June 3, 2004. This document summarizes the roles and responsibilities of the CAC over the course of the process and presents the Wastewater Assessment Process.

Organization and Purpose of CAC

The CAC consists of stakeholders representing members of various town boards, local environmental groups, the Acton Water District, several local businesses and the general resident populace. The mission of the CAC is to:

- Serve as a representative Acton forum to offer views, comments and opinions about the CWRMP/EIR to the Town and consultant team;
- Help the Town and consultant team identify all relevant issues, topics and concerns about CWRMP/EIR by offering its good ideas and constructive comments;
- Demonstrate to MEPA and DEP by its periodic meetings and discussions that the diverse views of the community have been considered in the process; and
- Provide outreach to Acton residents and the community at large to communicate the process and results of the CWRMP/EIR and, hopefully, help to build a consensus for the plan that emerges from this process.

Previous CAC Meetings

In addition to the kick-off meeting, the Phase 2 process has two CAC meetings scheduled prior to completion of the Phase 2 report. Phase 1 meetings of the CAC achieved the following goals:

- Confirmed each Needs Area and established the level of effort to characterize each area through field investigations, especially for non-wastewater concerns such as neighborhood character, historical significance, etc; and
- Established the objective criteria by which each Area's wastewater needs will be assessed.
- Confirmed the results of the needs rating of each Study Area and established the technical criteria for determining potential sites for wastewater treatment and disposal satellite facilities.



Goals of the CAC (July 15, 2004 Workshop)

Goals of the July 2004 CAC meeting are to:

- Reach consensus on the technical (e.g. engineering and treatability) and “non-technical” (e.g. community, socio-economic, and implementability) criteria and assign relative weights to each if applicable.
 - The CAC will be evaluating criteria that are not typically defined as technical criteria to help prioritize the needs areas and refine the needs areas into study areas. These criteria include neighborhood character, historical significance, aesthetics, implementability, resource protection, and other factors.
- Determine disposal areas for further exploration.
- Reach consensus on the priority of needs areas and the preferred solutions.

Pre-work for the CAC (July 15, 2004 Workshop)

We request that the CAC review the material in the handouts prior to the meeting so that the meeting can quickly reach its goals. In particular, please consider the discussion included under Step 4 and review the following questions related to the tables included with this handout.

- Handout Table 1 and Table 2:
 - Which criteria are most important to you and are there other criteria that are not included here that should be?
- Handout Table 3:
 - Do you agree with the rankings of each service area given the “needs” criteria?
 - Which solutions criteria are important to you and which may not be included in the handout?
 - Are the recommended solutions feasible?
 - Do the recommended solutions match your vision of Acton’s long-term character?



Needs and Solutions Process Summary

Figure 1 shows an outline of the assessment process. The process is comprised of two tasks, Needs Assessment and Solutions Assessment, which are conducted concurrently. **Table 1** and **Table 2** list the criteria for Phase 1, which covers the first three steps.

Step 1

Technical Criteria Evaluation. Areas in need of wastewater disposal solutions are identified. The data from the BOH records, CAC input, previous reports and studies, water sampling, and local regulations and bylaws form the basis for the analysis of the “needs” rankings.

General Technical Evaluation of Solutions. Potential technical alternatives for wastewater collection, treatment, disposal and management are evaluated for application in Acton.

Step 2

Create Needs Areas. Needs areas are created based on the technical evaluation and on “non-technical” parameters, including criteria suggested by the CAC.

Disposal Sites Evaluation. In-town locations for disposal facilities are identified through an evaluation similar to the needs assessment. The project team searched for publicly owned property with favorable soils located outside of sensitive resource areas.

Step 3

Create Service Areas. Needs areas are grouped into geographically logical areas, called service areas. Clusters of lots needing alternative wastewater disposal solutions as determined through the needs analysis are combined.

Figure 2 and Figure 3 show the results of applying this analysis to the Town. The figures show locations most likely suitable for on-site wastewater solutions and locations with potential need for off-site wastewater solutions. This lot-by-lot analysis was used to define future needs areas, realizing that data do not exist for all lots and off-site solutions are not practical for isolated lots. Figure 2 displays the minimum service areas based on combining closely grouped areas determined to require off-site solutions. Figure 3 displays the maximum service areas based on combining closely grouped areas requiring off-site solutions and adjacent parcels requiring on-site mounded and innovate/alternative systems.

Identify Disposal Locations. Potential locations are identified through analysis of the technical criteria and by applying the “non-technical” criteria similar to the process used to create needs areas. Through CAC input the team added land owned by non-profit agencies and large lots that are not fully developed, as well as locations along the Route 2 corridor.

The lots shown in **Figure 4** are the primary focus for locating satellite facilities. This process also benefited from the lot-by-lot detail provided by the converted BOH records. Preliminary analysis was completed in Phase 1, with continued analysis, including onsite investigations, in the next phase of the CWRMP/EIR.



Phase 2 begins with Step 4 and the June and July CAC meetings.

Step 4

Prioritize Service Areas. The service areas identified at this point are all priorities from a technical viewpoint. However, some technical issues may be more important than others to the Acton community. The “non-technical” criteria considerations also influence the rankings.

Prioritize Solutions At this point the potential solutions are matched to the prioritized service areas. First the service areas are prioritized and then recommended solutions are prioritized. The following discussion presents criteria that may be involved in the evaluation of “pros and cons” for each potential solution.

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 especially considering residents formerly included in the “old” sewer district that would not be served under the CWRMP plan.
- Perception of potential discharge in Zone II of public drinking water wells.
- Actual options available considering potential solutions (available discharge location, connection to sewer, etc.)
- Comparative “permitability” of the alternatives in terms of the relative ease of permitting and timeline to achieve regulatory approvals.

The time-line for implementation is also important because of the timing of related projects, as well as the overall time needed to implement a particular solution compared to other options.

- Potential to link to other opportunities such as rail trail construction.
- Other pending (large) problems that may see pressure from regulatory agencies (Audubon Hill, Gates and Douglas Schools, Powdermill Plaza)

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

- The solution should be consistent with the community’s Master Plan, Open Space and Recreation Plan, and other local planning documents.
- Secondary growth impacts (positive and negative) should be evaluated if sewerage a service area is considered a viable solution.

And finally, the expected costs of each solution will greatly factor into the overall assessment.