

COMPREHENSIVE WASTEWATER MANAGEMENT  
CITIZENS ADVISORY COMMITTEE (CAC)

October 20, 2005  
Town Hall Meeting Room  
Main Street, Chatham, Massachusetts - 4:00 pm

**PRESENT:**

CAC: Fred Jensen, Bob DePatie, Herb Bernard, Burt Segall, Phil Christophe, John Payson, Didi Lovett, and John Randall

CAC members not present: Chuck Pollard, David MacAdam, and Scott Tappan

TAG: Bob Duncanson, Judy Giorgio and Bill Redfield

Others: Chuck Bartlett

The meeting was called to order at 4:00 pm.

**Item 1: Minutes**

Minutes of the September 22, 2005 meeting were approved with the following corrections:

- Page 4, paragraph 4: change 25 mg/l to 26.25 mg/l.
- Page 2, paragraph 3: last sentence to read, *“Burt Segall added that more important savings can be achieved through careful engineering planning with regard to extending the time of sewerage system implementation and sewerage only enough of Chatham to satisfy nitrogen concentration requirements by future water-quality monitoring.”*
- Page 3, paragraph 3: delete paragraph and substitute the following provided by Burt Segall: *Over the years the CAC and TAG have discussed various treatment and disposal alternatives, e.g., a single treatment plant, several dispersed treatment works, etc. I assumed that alternate schemes would be evaluated in the Comprehensive Wastewater Management Study and that the CAC would discuss the recommendations. Apparently a decision has been reached to treat all collateral wastewater at a single location prior to an evaluation with CAC involvement. I did not suggest that the CAC be involved in a search for disposal sites. Clearly that is a consultant function. I asked why we were not involved in a discussion of a financial decision prior to funding design computations and plans.*

Bob Duncanson responded to the comments made by Burt Segall stating that no decision has been made and that the TAG and its consultants have been discussing options and will present proposals regarding alternatives to the CAC for discussion and review and recommendations to the Board of Selectmen.

**Item 2: Review of water use data used to estimate wastewater flows for properties in the preliminary sewer coverage map (by Stearns & Wheler).**

Bob Duncanson explained that the Town Manager had made a presentation to the Board of Selectmen on October 4, 2005 based on a “worst case fiscal scenario” and its possible impact on

fiscal planning. Stearns & Wheeler has been asked to provide background information regarding the sources of the data used in developing this “worst case fiscal scenario.”

Nate Weeks used a power-point presentation (attached) to explain the basis for data used in the analysis. The following slides/information was included in the presentation:

- A map featuring six phased areas for development of sewers in Chatham
- Information about existing flows (1 million gallons per day) and future flows (1.8 million gallons per day)
- A cost chart
- Betterment info
- Water consumption data from 2002 and 2003 were used. These data were multiplied by a factor of 0.9 to determine wastewater flows
- New build-out figures were applied to the calculations
- A factor of 1.5 was applied to the average consumption data to determine future wastewater flows
- Cost figures
- Alternative collection information was provided, i.e., gravity flow vs. low-pressure system using grinder pumps at each property.
- Considerations regarding the treatment facility size
  - Peak conditions
  - Minimum conditions also impact on design – careful engineering and design is needed

Following the presentation, Fred Jensen asked if there were questions from the committee.

Phil Christophe asked about the 0.9 figure used to calculate wastewater flows from water use figures as opposed to the 0.71 figure used in the 2001 MEP report. Nate Weeks responded that MEP has recalculated their number and determined that the 0.9 factor is appropriate. Nate Weeks indicated that 0.9 figure is an engineering “standard.” Bob Duncanson added that the error had occurred because of a difference in water use data (cubic ft. vs. gallons) and once this discrepancy was recognized the work was re-done by MEP.

John Payson asked about the use of a factor of 1.5 to estimate future flow. Nate Weeks explained that for purposes of fiscal analysis, this is not an extreme measure to use. It is difficult to estimate future needs as build-out will occur over a twenty-year time period and there is likely to also be re-development. It is also difficult to gauge average occupancy estimates that could change from two per household to three per household over time.

Fred Jensen asked about the future trends in seasonal occupancy. Nate Weeks said that the MEP has looked into this and sees the seasons stretching in the shoulder seasons and also a trend for more summer residents who leave during the winter months.

John Payson noted that the population has only increased by 15% since 1997. There were 4,483 single-family homes in Chatham in 2004 with a median of 0.64 people per bedroom and an average of 0.77 per bedroom. He noted that the Board of Health uses the 0.64 figure in its calculations.

Burt Segall asked Nate Weeks to expand upon his statements regarding the flow estimates. Nate Weeks responded that costs are primarily associated with installation of the collection system (excavation and restoration when pipes are laid) with the size of the pipe being a less significant cost factor. The difference between an 8" and 10" pipe is not a significant financial consideration. The sizing will need to be based on peak hour conditions, as well as minimum use consideration.

Bill Redfield added that any design will include a factor of 25% to 50% for reserve capacity.

Herb Bernard asked about pump stations vs. the use of gravity flow. Nate Weeks explained that a combination of the two is used with sewage flowing to lift stations at low points and then being pumped to higher levels. An alternative system would be a low-pressure system where everyone has a grinder pump on their own property and smaller pipes are used to collect/transport sewage. There are benefits and costs associated with each type of system. Low-pressure systems are not susceptible to infiltration while a gravity system, with larger and likely lower pipes, is often prone to infiltration problems.

Didi Lovett asked about maintenance issues regarding pumps. They are generally trouble free and last at least ten years.

**Item 3: Estimates of the components of cost that comprise the \$215 million capital costs of sewerage all properties in Chatham.**

Bob Duncanson explained that the Town Manager's presentation to the Board of Selectmen was based on a "worst case" fiscal scenario and was designed to put the total cost of sewerage the entire community in the context of the overall Capital Facilities Plan. The break down of the estimated \$215 million in infrastructure cost is:

- \$177,000,000 for the collection system (pipes, excavations, restoration, pumping stations, etc.)
- \$ 38,000,000 for the treatment facility (\$19,000,000 for the 1.2 million-gallon-per-day facility [south portions of town]; \$8,000,000 for additional capacity [north part of town]; \$2,000,000 for incidental costs of additional sludge handling/dispersal; \$9,000,000 for alternate dispersal site, if needed).

In addition, there is the connection cost for the parcels in town. At an average connection cost of \$2,500 per parcel (for the estimated 7,596 parcels used in the fiscal analysis) that would yield a town-wide connection cost of \$19,000,000.

The total estimated project cost, with interest, is \$286,000,000. There are many variables which may ultimately affect costs.

Fred Jensen noted that the largest portion of the cost is for the collection system that will be developed over a period of years, thus distributing the cost through time. Bob Duncanson added that the availability of contractors may also impact on the timeframe for development. A phased approach will be necessary.

**Item 4: Updates on work in progress:**

**A. Cockle Cove Creek salt marsh study.**

Bob Duncanson reported that DEP has completed the necessary field work and the report is due by the end of October to DEP.

**B. Massachusetts Estuaries Project's study of Pleasant Bay**

The Pleasant Bay fieldwork has been completed; modeling is being done. The study is due to DEP by December 31, so we expect to receive it by February, 2006.

Fred Jensen asked about TMDL reports based on the study. Bob Duncanson said that the TMDL office will begin drafting a TMDL report as soon as the report goes to DEP, so the TMDL figures may be available by March, 2006.

Fred Jensen asked if we can proceed based on information contained in the technical report rather than waiting for the TMDL report. Bob Duncanson indicated that this would be possible as there is a considerable time lag in waiting for EPA to sign off on TMDL reports, so we will not wait for final approval.

**C. Septic tank nitrogen loading to aquifer issue (35 mg/l vs. 26.25 mg/l).**

Bob Duncanson reported that DEP is preparing to make a presentation to the Barnstable County Wastewater Implementation Committee (WIC) regarding this issue. He expects this issue to be presented at the November WIC meeting.

**D. Re-runs of MEP's water quality model using Chatham's 2002/2003 four-quarter water use data and TAG's new build-out analysis for Chatham.**

Bob Duncanson reported that the model re-runs have not yet been done as they are awaiting resolution of the septic loading issue (36 vs. 26.25). Bob Duncanson added that the TAG is considering the benefits of obtaining the model ourselves to be able to do in-house modeling of future scenarios.

**E. Status of request for proposed work to be done on Lovers Lake and Stillwater Pond.**

Bob Duncanson reported that the RFP is being drafted and should be issued soon.

**Item 5: Other Business**

**Hydrodynamic Model Re-runs:** Fred Jensen asked about the analysis to be done regarding the Stage Harbor cut-through. Bob Duncanson explained that this and similar analyses will be done when all of the other model re-runs are conducted.

**Orleans Review of Chatham Data:** John Payson noted that at a recent WIC meeting it was reported that the town of Orleans had hired a consultant to review TMDL issues. He indicated that they may be reviewing the Chatham watersheds and TMDL information as a benchmark for Orleans. Bob Duncanson indicated that it would be interesting to read the findings of the

consultants from Orleans if they review Chatham data, but cautioned against a “dueling consultants” scenario. He noted that the state created the MEP to look at all embayments in a uniform, scientific manner. Chatham is aware that there are problem with the initial MEP report that are being addressed and we will not put things on hold pending studies by other consultants. The recent plan put forth by the Town Manager will begin to move things forward while we continue to resolve outstanding issues.

Adaptive management was noted as a new operating methodology at the state level. This will enable work to begin with changes being made as new information is obtained/developed and new technology becomes available. The advantage of a phased approach is that we will be able to measure success in certain areas and then make appropriate changes to future phases of the project. There are five embayment systems, so work will need to be done in each, but the plans for each may be adjusted through time as the project proceeds.

**Low-Interest Funding Options:** Bill Redfield explained that the financial data developed for the Town Manager’s “worst case” fiscal scenario were based on low-interest loans (2%). He explained that using the state’s “clean drinking water” funds (part of the state revolving funds) would enable us to obtain low-interest loans. He urged committee members to contact their Federal Representatives and Senators to request continued EPA funding of state revolving funds. He noted that this funding has decreased recently from \$1.1 billion to \$9,000,000. Further decreases could impact on low-interest borrowing options.

**Equitable Payment/Financing Options:** Phil Christophe commented on a survey included with meeting materials which indicated that citizens are generally willing to pay for improvements if payment is based on usage. He suggested that we should consider a payment scenario that would be based on water usage. A possible surcharge to the water bill was suggested as an equitable way to finance improvements. Bill Redfield explained that such a surcharge, which would be considered a tax, could not be done without special legislation at the state level.

It was agreed that discussions should begin on possible payment methods/financing approaches. Fred Jensen asked Phil Christophe to prepare an outline or “think piece” regarding payment options to begin discussion at the next meeting.

Bob Duncanson indicated that the TAG and Stearns & Wheler have been working on these issues and plan to present information on this subject in early 2006. Members were encouraged to email questions/ideas to Bob Duncanson for discussion in January.

**Wastewater Collaborative:** Bob Duncanson reported that the Barnstable County Assembly of Delegates completed its final public hearing regarding the Wastewater Collaborative proposal on October 19. The record will remain open for comments until November 2, 2005. There will be a vote of the standing committee for wastewater management on November 16 and a final vote of the Assembly of Delegates on December 7 regarding this issue. He indicated that there have been no substantial changes in the proposed legislation from what was presented in June. Two changes of note were that the reference to bonding authority has been removed and language has been added regarding inter-municipal agreements.

A discussion of this issue and whether the CAC should make further recommendations to the Board of Selectmen will be included in the next CAC meeting on November 17. The Board of Selectmen is scheduled to discuss this at its November 22 meeting.

**Cape Keepers:** Bob Duncanson distributed buttons for *Cape Keepers*, a new program designed to educate the public regarding wastewater issues. He also had posters about Wastewater IQ and Nitro and Bloomer, characters being used by Cape Keepers to educate and increase awareness of wastewater problems. Cape Keepers has a website: [www.capekeepers.org](http://www.capekeepers.org).

**Bill Hinchey's Memo of August 19, 2005:** Fred Jensen noted that Bill Hinchey has responded to the resolution passed at the last CAC meeting, adding "completion of the comprehensive wastewater management plan" as a priority. The memo indicated that Mr. Hinchey shares the committee's views on this subject and the omission of a specific reference to completion of the plan was an unintentional oversight.

**Item 6: Proposed next meeting date:**

The next meeting will be held on Thursday, November 17, 2005 at 4:00 p.m. in the Selectmen's Meeting Room.

The meeting was adjourned at 6:00 p.m.

Recorder: Marie Williams