

COMPREHENSIVE WASTEWATER MANAGEMENT  
**CITIZENS ADVISORY COMMITTEE (CAC)**

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

**PRESENT:**

CAC: John Randall, Fred Jensen, Didi Lovett, David MacAdam, Scott Tappan, Bob DePatie, Burt Segall,

CAC members not present: Phil Christophe, Herb Bernard, John Payson Kevin Mikita, Chuck Pollard

TAG: Bob Duncanson, Bill Redfield, Judith Giorgio

Others: Jean Young, Pat Siewert, Kristen Andres, T. W. Joy, Chuck Bartlett, Walter Butler, Lynne Pleffner, Paul Kelly, Jeff Gregg (Stearns & Wheler)

**Presentation**

George Heufelder of the Barnstable County Department of Health and Environment made a presentation to the committee regarding I/A systems. The information presented was based on results from the Massachusetts Alternative Septic System Test Center. Mr. Heufelder provided an overview of septic issues. Powerpoint slides (attached) and discussion addressed the following:

- Why use I/A systems?
  - Smaller leach field
  - Reduce containments
- How many I/A systems on Cape Cod?
  - 600 now; 50 in Chatham
- How well do they work?
  - Recirculating sand filters – remove approx 50% of nitrogen
  - Fast Unit (most popular) – reduces approximately 50% of nitrogen
  - Bioclere systems (trickling filter) – removes 40 to 60% of nitrogen
  - Amphidrome (sequencing batch reactor) – 15% removal
  - Waterloo Biofilter – 15 to 17% removal
- Results are based on actual use through two winters
- All require quarterly inspections by good operators
- Systems are more effective during warm weather
- George Heufelder advised that towns not make special regulations to accommodate seasonal homes.

The test fields were operated with some seasonal variations. Regarding seasonal use: most can start up in approximately two weeks once they have been used regularly. Combining homes in clusters would improve results from seasonal shut-downs.

- Shared systems also offer:
  - Shared capital costs and maintenance
  - Better treatment potential
  - Less area required
  - More likely frequent/qualified operator inspections, therefore, better results

***Questions followed the presentation:***

Dave MacAdam asked about long-range expectations regarding on-site I/A technology. George Heufelder said that major improvements are not expected without improvements in technology that may not be cost effective for individual home use. Results from individual systems will likely remain in the range between 40% and 60% nitrogen removal. Cluster or combined systems are mostly likely in the future, offering better economies of scale.

Didi Lovett asked which type of I/A system is best for cluster use. George Heufelder explained that there is no single answer to that question as situations vary depending on distance for piping, number of homes. All of the systems described can work in cluster situations and results will depend on how well they are engineered to meet specific goals.

Will Joy of the Orleans CAC noted that the need for operation and maintenance on a frequent basis is important and is a cost factor to be considered. George Heufelder agreed, noting the importance of having qualified operators and setting a schedule of frequent monitoring to maximize effectiveness of the system. He advised against seeking the cheapest solution as it rarely produces the best results.

Dave MacAdam asked about the maximum size for effective cluster systems. George Heufelder said that there is no set number, but that cluster systems generally become cost effective when serving 5 to 20 houses. He urged the committee to ask questions and get second opinions regarding engineering proposals.

Burt Segall asked about the test facility results of 40%-50% nitrogen removal when used intermittently. George Heufelder noted that their data indicated that this level of removal was accurate, even for systems being used only on weekends.

The committee was invited to visit the test site that now contains 15 separate systems.

**Item 1: Minutes**

Minutes of the 11-18-04 meeting were approved as submitted.

Minutes of the 12-16-04 meeting were approved with the following correction: change “months” to “quarters” in the discussion of water data calculations on page 3.

**Item 2: Presentation by George Heufelder (taken out of order – see above)**

**Item 3: Proposal for study team to continue development of wastewater management solutions even though DEP's final TMDL report for Chatham currently recommends limiting the nitrogen load into Cockle Cove Creek to present levels.**

Fred Jensen suggested that several planning assumptions could be made to allow work to continue:

1. There will be no increase in nitrogen loading allowed in Cockle Cove Creek
2. There will be an "unlimited" amount of nitrogen loading allowed in Cockle Cove Creek.

There was brief discussion about these options. John Randall questioned the use of the word "unlimited" in the second scenario. David MacAdam suggested using a more likely scenario of double the current level.

Bob Duncanson expressed concern about the perception that things are "on hold." He noted that work is proceeding in other areas:

Muddy Creek

Hydrodynamic scenarios (Stage Harbor, Cockle Cove Creek)

Data collection and interpretation to address the Cockle Cove Creek loading issue

He agreed that it is not unreasonable to ask the model runners to proceed with some "what if" scenarios, but cautioned that the model runs will not be free. He also commented if the effort/expense could be justified given the time frame to address the Cockle Cove marsh issue. He noted that we are expecting results from the USGS regarding the mounding issue at the landfill. Once this information is received, it may make more sense to proceed with model runs.

Fred Jensen asked if it was unrealistic to assume that a "no additional nitrogen" scenario in Cockle Cove Creek might be the final result of the TMDL report. Bob Duncanson explained that the restriction in the original TMDL report was not based on any scientific evidence so they are now attempting to gather the needed data. The state is working to develop a methodology to answer the scientific questions regarding the salt marsh. He added that SMAST, Coastal Zone Management and DEP are all involved in seeking answers.

Bob Duncanson suggested that the idea of planning assumptions be reviewed with Stearns and Wheler and the TAG to see what level of effort would be required to proceed with modeling based on the suggested (or similar) assumptions. He agreed to do this prior to the next meeting.

Burt Segall asked if nitrogen in the Cockle Cove Creek area is from septic systems. If so, could sewerage of that area reduce the current watershed load thereby allowing additional discharge of treated effluent without changing the overall watershed load? Bob Duncanson suggested that this is one possibility, but there are many scenarios. We need to decide if it makes sense to spend time and money now on model runs rather than wait for the final information regarding Cockle Cove Creek.

David MacAdam asked about the study being done to clarify the situation at Cockle Cove Creek, asking if the work is site-specific or if it is about other wetlands, can the information be applied to Cockle Cove Creek? Bob Duncanson said that both are occurring. A review of information from other marsh systems is being conducted as well as the gathering of site-specific data.

Fred Jensen expressed the desire to continue to make progress and questioned whether the goal of presenting a plan at the 2006 town meeting was realistic. Bob Duncanson agreed to have more information about running additional scenarios at the February meeting.

**Item 4: Request by Walter Butler, president of FCW, that the CAC join the FCW in a meeting with the Board of Selectmen to discuss the FCW's proposed "growth neutral" policy for Wastewater Management solutions.**

David MacAdam expressed his opinion that the CAC has already endorsed this concept and that there is no need to act further. Didi Lovett suggested that the CAC could attend the meeting as an information resource. Scott Tappan stated that the CAC should maintain its independence from other groups. If the CAC is to attend the meeting, it should be at the invitation of the Board of Selectmen. Bob DePatie agreed, stating that the CAC endorsed the "growth neutral" policy at its last meeting.

There was general agreement that the CAC should not attend in an official capacity unless invited by the Board of Selectmen.

**Item 5: Role of the proposed Cape Cod Wastewater Collaborative and the process by which it would be established.**

Bob Duncanson explained that a proposal has been made to create a regional collaborate regarding wastewater issues. A Blue Ribbon Panel was created to explore this issue and recommend the appropriate approach. Bob Duncanson participated on this panel, along with representatives of the towns of Barnstable and Falmouth. The panel is making presentations to all 15 towns on Cape Cod to provide information and solicit feedback. It will make a presentation to the Chatham Board of Selectmen on February 22. By the mid March, the panel expects to have feedback from all towns and be able to decide whether to proceed, revise, or abandon plans to create a regional collaborative. If it is decided to proceed, the proposal will be submitted to the Barnstable County Assembly of Delegates for further debate.

The merits of this proposal are primarily financial as it is expected that a regional group will have greater leverage in seeking funding at the state and federal levels. Examples were cited: Monroe County Florida (the Florida Keys) and the Chesapeake Bay Area.

**Item 6: Other Business**

Dave MacAdam asked for copies of George Heufelder's Powerpoint presentation. Bob Duncanson will contact George Heufelder for copies of the presentation.

Scott Tappan suggested sending a thank-you letter to George Heufelder. Fred Jensen agreed to do this.

Copies of the CAC's submission for the Annual Report were distributed.

**Item 7: Proposed next meeting date: Thursday, February 17, 2005.**

The meeting was adjourned at 5:50 pm

Recorder: Marie Williams