

The Town Council of the Town of Charlestown met on Thursday, April 10, 2008 at 5:30 p.m., duly advertised and posted, at the Charlestown Elementary School, Carolina Back Road, Charlestown. Councilors in attendance were: Harriet A. Allen, John O. Craig, Jr., (arriving at 6:25 p.m.) James M. Mageau, Bruce Picard and Katharine Waterman. Also present were Town Administrator Edward Barrett, Building Official John Matuza and Town Clerk Jodi LaCroix

The meeting was called to order by Council Vice President Mageau at 5:43 p.m. followed by the Pledge of Allegiance. After introductions were made, Mr. Mageau turned the meeting over to Russ Chateaufneuf from RIDEM.

Below is the paraphrased power point that was shown to the public:

Charlestown currently has 5,128 Onsite Wastewater Treatment Systems (OWTS) town wide. Of that amount, 2,866 are within the Critical Resource Area and vacant parcels total 950.

Rule Applicability: If you have an OWTS (i.e. septic system) that is not a cesspool and is not failed: no need to upgrade system.

If you're OWTS (i.e. septic system) is failed and you are in the CRA: your replacement system will need to be a denitrification system.

If you have a cesspool serving a single family home and it is not failed: No need to replace the system under current DEM rules, but you may need to do so in the future under a new State law or Town ordinance. If replacement is required and you are in the CRA, you will need to install a denitrification system.

If you have a large capacity cesspool defined to be one serving more than 20 people or multiple units of housing: Your cesspool will need to be upgraded to either a denitrification system if you are in a CRA or a conventional system allowable otherwise.

Cesspool replacement summary: DEM rules under development per new State law: By 2013, cesspools within 200 feet of the following must be replaced: shoreline feature, public well or drinking water supply impoundment.

Town Ordinance: Since Charlestown's Wastewater Management Ordinance requiring cesspool removal is more stringent, Charlestown will be exempt from the State cesspool requirements.

Federal and State prohibition on the use of large capacity cesspools (serving a commercial facility or multifamily dwelling) as of January 1, 2008.

How many repairs will be affected by the new OWTS rule?

OWTS Condition	Number of OWTS	When
Cesspool Replacements	140	May 2009 or 5 yrs from inspection date
Uninspected Homes	136	May 2009 or 5 yrs from inspection date
Future Failures	260	13 per year over next 20 years
Total	536	

The annual OWTS Repairs for Charlestown:

1992 through 2001 were 20 to 40 per year. Then it gradually began to go up eventually in 2007 there were over 100.

What can you do to keep your septic system working?

Maintenance

- Inspections-required by Town Ordinance
- Regular pumping, frequency based on inspection results and system use
- Install an effluent screen
- Install access risers
- Note: reimbursement money available for risers or screens through DEM Grant until end of May 2008. The town applies for the Grant
- Be careful what you put into the system. Don't put grease, paint, harsh chemicals, food waste or garbage into the toilet or down the drain.

Rule Applicability Cont.:**Now you wish to make changes to your home or building use.**

OWTS installed without State approval, installed prior to April 9, 1968 or cesspools. Must upgrade if:

- Increase design flow to the system
- Change footprint of the structure
- Change of use (including conversions to year-round)
- Building construction or renovation affecting >50% of the living area
- Add additional floor level of living space
- Increase the living space

Nitrogen Problem:

- Too much nitrogen causes "over fertilization" of the ponds
- Increase plant growth-plants die-decomposition consumes large amounts of oxygen
- Low oxygen levels stress fish and other animal life-reduce growth and reproduction
- Eelgrass, important part of the ecosystem, unlike other vegetation, is very sensitive to inputs of nitrogen
- Further information: "Nitrogen Inputs to Rhode Island Coastal Salt Ponds-Too Much of a Good Thing?" CRMC 2007

Nitrogen Loading:

CRMC Report: Eelgrass criterion:

- Cape Cod study: 80-90% eelgrass bed area lost when nitrogen inputs reach about 27 lbs/acre/year
- Nitrogen loading to all of the salt ponds already at or beyond 27 lbs/acre/year
- Achieving a load of 27 lbs/acre/year requires nitrogen reduction of at least 50-60% for Green Hill Pond and at least 25-50% for Ninigret Pond, but at this level 8-90% of the eelgrass beds would be lost

DEM Study:

- The required nitrogen reductions to meet target conditions for Green Hill Pond are 61%. Ninigret Pond is currently meeting the target condition under this study's methodology

Sources of Nitrogen Loading to Green Hill Pond from Groundwater (URI Manage Model, 2005)

1. Septic 74.3%
2. Lawns 8.7%
3. Agriculture 8.6%
4. Pets 4.7%
5. Open Space 3.7%

Sources of Nitrogen Loading to Ninigret Pond from Groundwater (URI Manage Model, 2005)

1. Septic 58.2%
2. Lawns 13.5%
3. Agriculture 15.6%
4. Open Space 9.1%
5. Pets 3.5%

Fate of Nitrogen:

- Nitrogen from the OWTS reaches the groundwater and moves towards surface water
- Fate in groundwater depends on groundwater travel path. Closer to the ponds, the greater the impact on the ponds. However, studies have shown nitrogen can travel long distances in groundwater with little loss
- Groundwater moves very slowly. Takes several days to several years to move to ponds

Denitrification Requirements:

Rule 39.2: Denitrification in the Salt Pond and Narrow River Critical Resource Areas required for:

- Applications for new systems
- Applications for Alternations
- Applications for repair addressing leach field expansion or replacement

Critical Resource area boundary defined as in CRMC Special Area Management Plans (SAM Plans)

Why require denitrification systems now?

Reducing nitrogen to the coastal ponds and Narrow River has been state policy for two decades.

Technology capacity now developed:

- Have multiple (6) approved denitrification technologies. Rapidly developing field
- Licensed OWTS designers and installers trained in the use of these technologies
- URI developed training programs for installers and designers
- Private sector maintenance providers now available for repair and service of these technologies (approximately 5)
- Prevents further degradation of the ponds from OWTS derived N loadings
- For ponds not yet impaired for dissolved oxygen or habitat quality, the State policy will ensure that OWTS derived N loadings will not contribute to loss of uses protected under the Clean Water Act

Financial

- Cost of typical conventional system: \$10,000 to \$30,000
- Cost of denitrification system: \$30,000
- Cost reduction initiatives: new technology, conventional leach fields to be allowed on larger lots and pending legislation

- Financial Assistance: RI Community Septic System Loan Program: Low interest loans (2%) 10 year loans available for repair or replacement. Charlestown has received \$800,000 to date

Facts on new DEM OWTS rules

- OWTS-Onsite Wastewater Treatment Systems
- Comprehensive update of the rules – all aspects (technical and administrative)
- Effective January 1, 2008
- Website: www.dem.ri.gov/programs/benviron/water/permits/isds/newowts/htm
- List serve – subscribe for updates; see above website for instructions

Mr. Chateaufeuf stated that they are trying to get the costs down as they are fully aware of the expense to homeowners. He stated that many meetings and workshops were held over a number of weeks to explain this system.

Mr. Craig called a recess at 6:45 p.m. Meeting reconvened at 6:55 p.m. Mr. Craig asked for resident questions.

Forrester Safford stated he has lived here all his life and as a builder has put in several of these systems. It is a step in the right direction. He asked why the water table was not used instead of the drawn line. Mr. Chateaufeuf said that regardless of where the water table is, nitrogen will still enter and follow the gravity, in this case, to the coastal ponds. Water table depth does not have an impact. Mr. Safford stated that DEM should regulate lawn fertilizers. He asked about swans and geese polluting the pond. Mr. Chateaufeuf said the issue has been brought up and they have been talking with Fish and Wildlife to see about controlling the population.

Ruth Platner asked if the power point would be on line and was told yes. She further stated that these systems were already required for major subdivisions of 6 or more. Developers are avoiding the regulations by keeping the subdivisions to 5.

Robert Mallon could not find the studies on the web site and asked if a link could be provided on the town's site. He feels there should be a multi-phase approach to this problem and there appears to be a lack of consideration of geological formations. Mr. Chateaufeuf said they have looked at geological information. The line is based on solid information. Actually the line could have even been moved further north. Ernie Panciera from Dem spoke on the watershed boundary and groundwater rates to the ponds.

Dan Slattery thanked the Town Council for hosting this so that everyone can get a better understanding. He repeated several of the points made to make sure he understood. He further stated that the numbers are much lower than what was publicized. He further stated that his conventional system cost \$20,000. A new system would cost \$10,000 more.

George Werrbach asked why his conventional system is 100 feet from his well. How does the water by-pass his well and get into the pond? Mr. Panciera asked about the distance between both, what directions. That all plays into it. Mr. Werrbach said his septic is higher than his well. He was told that the water that the well does not pick up goes into the ponds. Mr. Panciera said that he would not have to upgrade unless his system fails or he upgrades his home.

Tom DePatie said a letter that came out suggested a treatment plant. What would that cost? Mr. Chateaufeuf is not aware of the numbers. There is a draft report out that suggests that is an option but this report has not been thoroughly reviewed by DEM yet and is premature to come up with any conclusions. Mr. DePatie said that the numbers in the letter were over inflated. Mr. Mageau stated his numbers were from the Town Hall. Mr. DePatie stated that the numbers were skewed.

Jim Cairns, Chairman of the Wastewater Management Commission thanked the panel for coming and speaking for the Commission, "let RIDEM explain themselves". We need to overcome the stats being used and the Council needs to do more work on this.

Michael Foley said he is a lobster fisherman and needs the water to survive. He accused people of overloading their systems and ruining the water.

Mary Taylor stated she was against a municipal sewer system. She asked if it were a possibility. Mr. Chateaufeuf said that a draft report by Woodward and Curran studying how to address nitrogen problems at Green Hill said that is an option. He further said this report is a draft; many agencies are looking at it now to see what the next steps could be.

Mrs. Taylor asked about breaching Green Hill Pond. Jim Boyd, CRMC said this might improve water quality but will have ecological impacts. The state has just spent \$7.5 million dredging Ninigret Pond, pulling sand from the breachway. Green Hill Pond would need continual maintenance but it is a possibility. He further stated this is still questionable whether this is viable. No one is advocating a municipal sewer system at CRMC or DEM.

Linda Fabre asked how the 13 per year figure was arrived at. Mr. Chateaufeuf said these are estimates based on past statistics. She asked why a municipal system is not be advocated. Mr. Boyd told her that they feel a properly managed system will do the job.

No name given: Asked for a prediction for when ponds will be better because of this. Mr. Chateaufeuf said this is the best management practice and that there is no numerical amount of nitrogen advantage associated with this policy. By adopting this, the other ponds will be prevented from being further impaired. If they are not impaired, it will maintain the level of good quality. He also stated that Cape Cod is dealing with these same issues and the concepts and policies are also being done there.

Liz Scott, DEM said we have not identified a problem in Ninigret Pond but it is heading toward a problem. No analysis has been done whether this policy will work on the pond. Would be smart of the town to do an analysis on Ninigret.

Virginia Wootten asked about composting toilets. Mr. Chateaufeuf said there is a reduction in waste load using the composting toilets but does not know if that alone would satisfy the need.

John Rosa asked if the demarcation line touches a corner of a lot, does it mean a new system is needed or not. Mr. Chateaufeuf responded that it would depend on the location of the leach field. Mr. Rosa asked why the Westerly line tapers off, they the Shelter Harbor Golf Course that uses fertilizers on their greens. Mr. Chateaufeuf said they are in the Pawcatuck basin.

John Rookwood asked if Charlestown sustains a direct hit from a hurricane, could a homeowner rebuild the same size house or upgrade? Mr. Chateaufeuf said he did not know that answer. When Hurricane Bob hit, they had to come up with a policy tailored to the conditions at the time. Mr. Rookwood asked if the local building codes would apply to that. John Matuza said the building code doesn't speak to the septic system.

Bob Frost, Wastewater Management Commission told the audience that our Onsite Wastewater Specialist is Matt Dowling. The town has a program to help assist people and they should call Matt. Mr. Frost further stated that Mr. Dowling is an asset to the town; he is young and energetic, along with Steve McCandless, our GIS Technician.

No name given: If you allow a working system to be left alone, why can't a failed system be brought back? Mr. Chateaufeuf said the nitrogen levels need to be lowered. A point has to be set where upgrades have to be required. We do know this is the best management practice and will help all the ponds. Wastewater has the greatest impact on

all the ponds. The gentleman then asked if this were like the fire code fiasco after the Station Nightclub Fire; inspectors going around drumming up business for themselves.

Peter Ogle, Wastewater Management Commission suggested that this gentleman talk to Matt Dowling and he will get him the answers. The town has a list of approved providers. The gentleman further stated he just paid \$200 for someone to tell him there is nothing wrong with his five year old system.

Bruce Loeckler asked what chemical breakdown was on the numbers. He has been told that the nitrogen problem is birds and fertilizer not septic systems. Mr. Chateaufeuf said elemental nitrate. Scientists have put tracers in septic systems to distinguish the septic. The figures are based on scientific literature. Mr. Loeckler asked what percent of nitrates still go into the ground. Mr. Chateaufeuf told him it would not remove 100%. The standard is 50%. Some of the systems remove 70%.

Mike Rzewuski, Zoning Board of Review said there are a number of applications that have come before the Zoning Board that have these systems. The system does not reach maximum efficiency for several weeks. We have many seasonal homes here. During those several weeks, the system is not fully up and running. Mr. Chateaufeuf responded that it does take a small period of time to come up to speed. They feel that the home has a permit to use this every day. If the home is seasonal and not used daily, a lot less nitrogen is being discharged.

Roy Grinnell couldn't understand the cost of maintenance. Mr. Chateaufeuf said they do require maintenance. He gave an analogy; it is like a boiler. It needs service, to be cleaned, repairs occasionally. The cost is approximately \$200 per year. Mr. Grinnell asked about a high carbon footprint. He was told it was negligible, less than a TV. Mr. Grinnell also stated that many lots that were not buildable before are buildable now because of this system. This causes more building and he can't see where we are gaining that much. Mr. Chateaufeuf said it is a double edged sword.

No name given: This is a benefit for the citizens but within Charlestown, 3,500 property owners are being asked at some point to put in a system that costs about \$10,000 more (and may be able to be claimed on your income taxes). A certain number of people will spend the money for the general good. He asked if an environmental tax credit could be considered. Tax breaks are given when people buy hybrid vehicles. Mr. Chateaufeuf said there is another state doing that and it should be looked into. Mr. Mageau said the state is facing a budget deficit right now. Mrs. Waterman said she would bring this before the Washington County Regional Planning Council to see if they will take this on.

Deb Stokes questioned why notices were not sent to people about these meetings that were held and she asked how long the systems are good for. Mr. Chateaufeuf stated notice was provided to all local communities. A good effort was made to get the word out. As far as the system failing, this speaks to the viability of the technology. The larger states have been using these systems. Before they are used here, the system goes through a technical review committee with a cross section of people. It is more reliable than a regular system.

Ken Leonard asked if the town went with municipal sewers, will it increase commercial development? Miss Allen replied yes.

Cliff Vanover spoke on the effect of undeveloped lots and thought Mr. Chateaufeuf's answer was illogical. If house are built on those previous unbuildable lots, that is more of an impact. Mr. Chateaufeuf said this is not an easy topic to discuss and he probably erred earlier. There is no definition with DEM regarding unbuildable or undevelopable. No discussion of the concept of an unbuildable lot has taken place. Everyone has a right to ask for a permit.

Jim Lamphere said this issue should not be political and should be based on science. The Ponds have been degraded due to septic waste. Mr. Chateaufeuf is right on the mark

with that. DEM had no economic survey or financial implications before they set this rule? Mr. Chateaufeuf realizes that the systems are costly. They had assurances from Clean Water Agency on low interest loans to assist. DEM is looking at cost reductions. These are long term investments and will last generations with proper maintenance. Mr. Lamphere questioned the science this is based on. He said that this is not an exact science but based on an inexact science. Why was there not another plan? This denitrification system is not the only system. He also said you can't put affordable housing in with systems.

Dan Slattery, President of the Charlestown Citizens Alliance wanted to go on record as opposing the Town obtaining a court order to stop this. He feels the Council should focus on helping people pay for it. He read the following:

My Position on the Taxpayer Alert Letter Proposals

I would like to go on record as being opposed to both suggestions by Mr. Mageau's and Mr. Picard's in their Taxpayer Alert letter. I do not think that the Charlestown Town Council should go to Superior Court to challenge the current State environmental laws on septic systems that protect the environment. A dialog with State Representatives is a much more reasonable approach than going to court which does not represent a solution. Also, I am opposed to building a coastal sewer system and treatment plant at taxpayer's expense. If you speak with engineers and technical people who build these systems, who will find out there are too many technical, environmental, and financial roadblocks to implementing such a system.

The Focus Should be on Helping Citizens Pay for Environmentally Sound Systems

CCA supports the Town's Low Interest Loan Program that since its inception has loaned over \$800,000 to homeowners in need. We believe that not only should this program be expanded but that the Town Council considers other solutions to help families who may not be able to finance the replacements of Cesspools. We suggest looking into a bond to assist citizens with the costs of these replacements.

Misleading Statements and Omissions of Financial Facts in the Taxpayer Alert Letter

The letter from Mr. Mageau and Mr. Picard has frightened many citizens who think they must immediately pay \$35,000 for a new septic system. People need to know that is not the truth. You only need to replace your septic systems when it fails and most systems last 30 years or longer. Also, people should know that the difference between replacing a standard system and a new denitrification system is \$10,000. This is not an immediate crisis for Charlestown.

What Might the Costs Be to Build a Sewer System and Treatment Plant?

Charlestown does not have to reinvent the wheel or use taxpayer's money to get an understanding of what it would cost to pay for a sewer system and treatment plant. Go on the Internet and read about other coastal communities who face similar environmental concerns as Charlestown. For instance, Falmouth, and Chatham MA hired engineers who assessed the cost of putting in coastal sewer systems. In Falmouth, the average cost ranged from \$50,000 to \$100,000 per homeowner and in Chatham the total cost was over \$300 million for an average cost per homeowner of \$150,000.

In Summary neither Suing the State nor Building a Sewer System are Viable Options for Charlestown Taxpayers

I urge the Council to vote against the two proposals contained in the Taxpayer Alert Letter and focus their energy on helping the citizens who need financial assistance to replace their septic systems and cesspools.

Peter Ogle summarized the following and gave to the Clerk for inclusion:

No action is not an option for Charlestown given the continuing deterioration of our water quality. A large-scale municipal sewer system is also not an option as it is just a quagmire of environmental issues, engineering studies, legal actions, and town budget controversies.

- 1. I agree entirely with the positions put forth by the Salt Ponds Coalition*

2. *I would like to amplify the points made on the impact of moving large amounts of water from local aquifers: As president for the past 5 years of the QEBWA, which services about 110 homes, I have become aware of high level of nitrogen in our drinking water (3-4ppm vs. 10ppm). I have also become aware of the very limited size of the aquifer that more than 400 homes depend upon. Studies have shown that the aquifer has about 15-20m gallons of available water and the community uses about 8mgal each year. It is important that this 8m gal be recharged into the aquifer to avoid saltwater intrusion. We cannot afford to export this water to another part of town. I am sure that this situation is equally true in the town's other beach communities.*
3. *The Charlestown Wastewater ordinance has been relatively successful as about 320 of the towns 825 known substandard ISDS have been replaced since 2000. Another 79 have active RIDEM permits. In total about 350 cesspools need to be replace by the end of 2009.*
4. *The Wastewater Management Commission has long recognized that the requirement to replace cesspools places a Town mandated burden on a relatively small group of our citizens. To help resolve this problem, the Commission helped to make low interest loans available through the Community Septic System Loan Program. For the past 8 years about 60 of our homeowners have received financial help of a total of \$800k for upgrading their ISDS to meet our Town Wastewater Ordinance. Due to administrative errors this program is not in effect this year but should be reinstated next year. Perhaps of equal importance is that about 15 other residents were denied assistance, as their financial situation was not good enough to qualify for the loans. The State Housing Authority, which administers the loans, would have granted most of these loans if the Town had been willing to underwrite them, but the Town has a long-standing policy against this. I suspect that a good number of the 350 who still have cesspools will need financial assistance in order to comply. It is not the Town's or the State's objective to force these citizens out of their homes, but it is necessary that the Town and State protect the waters that we all depend upon. In many ways this is an affordable housing issue. And the current low interest loan program has insufficient funds and is not sufficiently flexible to deal with the reality of the Towns and States ISDS regulations. To put this in perspective, replacement of the remaining 350 cesspools with denitrification systems will cost about \$10M. This is the only relative large block of ISDS that require immediate attention and many of the owners of these cesspools may not need assistance. So the \$10M should be a conservative number.*
5. *We should develop a broader based, low interest loan program to help assure that all homes in Charlestown meet the Regulations. The program must be flexible enough to work for a broad range of financial situations. The appropriate commissions should work with the Administration, assessor's office and the wastewater specialist to formulate this program and identify possible funding methods. The details and financing options for such a program can then be considered in a Town Meeting.*
6. *It is far better for the Town to spend some money supporting low interest loans than to spend the money on legal actions and foreclosures or on endless engineering /environmental studies and legal actions in search of alternate methods of dealing with our water quality problems.*

Dave Prescott from Save the Bay spoke in favor of the new regulations. No written statement was forwarded to the Clerk.

Mark Belanger from the Salt Pond Coalition spoke in favor of the new regulations. No written statement was forwarded to the Clerk.

Miss Allen commented that Mr. Chateaufeuf's numbers were similar to the Woodward-Curran report. She feels we should work on a multi prong approach and not encourage the birds on the ponds or fertilizers. Miss Allen also said that she felt DEM and CRMC did a good job on explaining thins. Miss Allen said that there is some very egregious information that went out in the Taxpayer Alert letter. Mr. Mageau stated that she and Mrs. Waterman did not support his efforts. Mr. Mageau wanted to take a swing at DEM in the backroom with a lawsuit and she feels he was trying to silence herself and Mrs. Waterman. Miss Allen stated that she and Mrs. Waterman pushed for this meeting.

Mrs. Waterman was impressed with the number of people that came to this meeting. She also thanked Mr. Mageau for raising an issue that the people are interested in but admonished him on the way he did it. Mrs. Waterman would like to see fertilizer

regulations in the SAM Plan area. She also supported those who objected to the unbuildable lots now being permitted.

Mr. Picard said the letter went out for the purpose of informing the people and it had its desired effect due to the number of people that showed up tonight.

Mr. Mageau said that these issues were being debated in 1983. The problem is still not solved. He asked Mr. Chateaufeuf if the people that did the report, Woodward and Curran, spoke to him.

Liz Scott said that South Kingstown hired Woodward and Curran last year. There were three public workshops that she attended. She was not given a copy until two weeks ago. She met with one project sub consultant only on nitrogen analysis. No-one from DEM met with them.

Mr. Mageau said the town's landfill is located near the Critical Resource Area. There is no groundwater pollution. Nothing is reaching the wells. Wouldn't an ISDS be the same? Mr. Boyd responded that it would depend on the geology. Mr. Panciera said he is assuming that the landfill concern is metals not a nitrate. Mr. Mageau said the old landfill had septic dumped in it, never reached the ponds. Mr. Chateaufeuf had no specific information on the landfill. You are raising points on disposal sites and he has no facts on them. Ms. Scott suggested that if EPA has signed off, it was properly closed and no migration. Mr. Mageau said the old landfill is not capped. Ms. Scott then said we needed more information then.

Mr. Boyd spoke on migration. He said that CRMC's website has information including a USGS study.

Mr. Mageau stated that Woodward and Curran is a well respected firm. Page 57 of their report has 0% nitrate reduction expected. He is hearing conflicting things. Mr. Chateaufeuf reiterated some key points, projections and population. He also stated that this report has not been fully reviewed and digested. Only portions have been read.

Mr. Mageau said if this report is correct, we don't need denitrification systems.

Mr. Craig thanked everyone for attending and for the education we all received.

Motion made by Mr. Craig, seconded by Miss Allen to adjourn. Mr. Mageau stated he had a motion to enjoin RIDEM. Mr. Craig stated that there is a motion and second to adjourn. Mr. Craig adjourned the meeting at 9:45 p.m. Mr. Mageau objected to this as he had a motion and the agenda had not been completed. Mr. Mageau further stated that Mr. Craig denied Mr. Mageau his legal right to introduce a motion and denied Mr. Picard his legal right to second the motion.

ATTEST:

Approved May 12, 2008 with the actual Power Point as an attachment

Jodi P. LaCroix, CMC
Town Clerk