

WASTEWATER ADVISORY COMMITTEE

A G E N D A

TOWN OF CHINCOTEAGUE, VIRGINIA

September 27, 2012, 9:00 A.M. – Council Chambers - Town Hall

CALL TO ORDER

ROLL CALL

AGENDA ADDITIONS OR ADOPTION

1. Presentation by FLOMEC representatives
2. Newsletter / Draft Progress Report to Town Council
– Review draft– W. Neville
3. Updates for Discussion
 - a. Status of Main Street Force Main
 - b. Atlantic Town Center
 - c. Next Steps
 - Planning Commission work session on October 9th at 6pm
 - Field Trip to Cape Charles
 - Evaluate/Rank alternatives
4. Committee Member Comments

ADJOURN



City Chooses Distributed Wastewater Over Conventional Sewer

LOCATION: Piperton, Tennessee
A fast-growing Suburb of Memphis

We've all seen rural towns get "discovered" when they are within commuting distance of a thriving metropolitan area. Practically "overnight" it seems pastures are transformed into sub-divisions.

With its lower tax rate and a brand new exit on the Interstate loop, the city of Piperton was well poised for growth. Its population has doubled in the last three years and is expected to reach 20,000 by 2024. Given the chance to design their infrastructure from scratch, Piperton's city government took the opportunity to choose "smart growth" for their community.

Bob Conrad, President of Mid-South Engineering Consultants, LLC, has been the City Engineer since 2004. His experience and understanding of wastewater treatment made him well prepared to support the newly formed Sewer Committee. Their mission was to determine the best method to treat wastewater for Piperton's anticipated population boom.

"Initially, we looked at running lines to tie into a centralized sewer system in one of the two neighboring towns. To our surprise, both Rossville to the east and Collierville to west were reluctant to allot capacity for Piperton residents," said Bob Conrad.

"Beyond the \$2-5 million dollar capital outlay, we knew the real issue with building our own treatment plant would be the operational costs. Initially, there would be only a handful of households to pay for the full-time staff required to manage such a facility," he explained.

"Once we knew we'd go distributed, we agreed it should be fixed film.... We compared four companies & AquaPoint came out on top."

— BOB CONRAD

The Sewer Committee agreed they did not want put an unfair burden on the taxpayers in anticipation of growth so they decided to look at a decentralized (distributed) wastewater treatment solution that could be expanded as the city grew.

Bob Conrad outlined the 4 key reasons a distributed sewer solution made more sense for Piperton:

1. Development can be on a "pay as you build" basis
2. Low operational manpower requirements
3. The drip/disposal field would satisfy Piperton's open space requirement
4. The drip/disposal field could be installed in flood plain areas that otherwise would not be used in a development

"Besides the synergy of multi-purpose land use for open space, flood plain and drip field, the operational piece was a big part of the decision to go with distributed treatment," Mr. Conrad added.

"Rather than pay for 2-3 full-time employees for a centralized treatment plant, many times we'll only need one hour a week for a public works employee to visit each distributed plant. Another advantage is the effluent only needs to be sampled on a quarterly basis because the treated water goes into the ground and undergoes additional natural filtration. Central Wastewater Treatment Plants that discharge to surface water require daily effluent sampling that becomes part of the operator's job."

next page ►

Distributed Wastewater Infrastructure For



“They (AquaPoint) always had a representative on site during the installation process which was great,” he said.

“The ability to use the same field for three functions - open space, flood plain and drip irrigation was also too good to pass up. It really was a perfect opportunity to maximize the use of land so efficiently.”

“Once we knew we'd go distributed, we agreed the technology should be a fixed film, attached growth trickling filter treatment (FFTF) because of its successful track record in other parts of the state. We compared four companies and AquaPoint came out on top,” said Bob Conrad.

KEY CHALLENGES:

The AquaPoint Design Team needed to address these specific requirements for Piperton's situation.

- Make each system "modular and scalable" so it could be "phased-in" as needed on two levels: within each individual system as well as for the town's entire wastewater infrastructure.
- Accommodate flows ranging from 500 gpd to 100,000 gpd.
- Provide easy to operate technology with a minimal time requirement for the operator.
- Have very low life cycle & operation and maintenance costs (O&M)
- Use the effluent for drip irrigation

“...their control system had the capability to call our maintenance personnel ... That saves real money for Piperton ratepayers.”

THE AQUAPOINT SOLUTION

According to Bob Conrad, the Sewer Committee selected AquaPoint's Bioclere™ technology for the following reasons:

- AquaPoint had a proven track record of successful installations across the state and elsewhere in the country
- Bioclere had the lowest maintenance requirements
- Bioclere was the easiest to install and operate
- Bioclere has low capital and O&M costs
- AquaPoint's monitoring system could alert someone immediately about an alarm condition

“Their control system had the capability to call our maintenance personnel when there was an alarm condition. That single component has the biggest impact on how we operate day-to-day. Knowing we'll be notified when a system needs attention means that our public works employee can be working on something else without worrying about the treatment systems. That saves real money for Piperton ratepayers.”

The Aqua Alert™ Remote Telemetry Monitoring System is a customized control package that monitors each individual system on one common network. Each system's control panel transmits data related to the mechanical functionality of that specific Bioclere to an internet-based software program.



Integrated Water Resource Management

Aqua Alert uses wireless transmission and allows the operator to check, in real time, the working condition of each unit from one remote location. This makes it easy for a single operator to oversee and have access to a large number of distributed plants because it allows the operator to:

- Monitor system components
- Adjust all settings
- React immediately to alarm conditions

The main advantage of Aqua Alert and it's integrated Auto-Dialer is that it allows an operator to address any mechanical issue in the most timely and cost-efficient manner. This ensures low O&M expenditures and consistent compliance.

Finally, the installation process is simple with Bioclere. "From their design review through installation, they were right there. AquaPoint always had a representative on site during the installation process which was great," he said.

RESULTS

As of March, 2008, Piperton has installed four systems with two under construction. When these are all operational the Bioclere systems will be capable of treating wastewater from 750 homes. The systems range in size from 20,000 gpd to 80,000 gpd. Currently, the total distributed network can handle 280,000 gpd.

"We believe choosing the distributed method and installing the treatment plants ignited our growth and gave us an advantage over other locales."

But this is just the beginning. Piperton is in the initial stages of development and their decision to

go with distributed wastewater treatment has already proven to be a smart choice.

"At the time we were contemplating this, there were only 1-2 subdivisions in the preliminary stages. We believe choosing the distributed method and installing the treatment plants ignited our growth and gave us an advantage over other locales. Five high-quality developers came in after we authorized distributed sewer. That was a welcome surprise," said Bob Conrad. "The kind of developers we want to attract spend millions of dollars so putting in a sound treatment technology is critical."

The town of Piperton named the AquaPoint Bioclere System their preferred and standard treatment technology. From the beginning, their goal was to select one brand of treatment plant for future development throughout the entire town for several reasons:

- Allows their Maintenance Department to stock one set of spare parts
- Eliminates the need to communicate with and rely on multiple manufacturers
- Simplifies training and O&M

Project Facts: Piperton, TN Case Study

Treatment Standards:				
Influent	Pollutant	mg/l	BOD ₅ = Biological Oxygen Demand	
	BOD ₅	250		
Effluent	TKN	45	TKN = Total Kejldahl Nitrogen	
	BOD ₅	<45		
	NO ₃	<20	NO ₃ = Total Nitrate	
	FC	<23	FC = Fecal Coliform	

Capital & Installation Cost Per Home: \$5,000.00

O&M Labor: 1 hr/wk 4 hr/mo

Standard System Components:

- Flow Equalization
- Recirculation Tank
- Weir Splitter Box (above 20,000 gpd)
- Aquapoint Biocleres
- UV Disinfection Units
- Drip Irrigation System

Electrical Consumption:

Flow	kWhrs/Mo	Cost/kW/hr	Cost/Mo	Cost/Home/Mo
20,000 gpd	(+/-) 2000	\$0.08	\$160	\$2.96
80,000 gpd	(+/-) 5000	\$0.08	\$400	\$1.85

AquaPoint designs and manufactures wastewater treatment systems for distributed wastewater infrastructure and comprehensive water resource management.

At AquaPoint, we believe each wastewater treatment solution is unique. With our advanced portfolio of fixed-film, biological treatment technologies, we can address a wide variety of waste stream characteristics and meet the most demanding treatment standards.

All AquaPoint products, processes and resources generate cost-benefit advantages greater than those associated with conventional onsite systems and traditional sewer. We deliver real cost savings by integrating modular and scalable technologies that

have been selected specifically for their simplicity, natural stability, capital & life cycle cost efficiencies and regulatory acceptance. **AquaPoint is a 'Green Gazelle' company and compatible with LEED certification projects.**



IF YOU ARE A TOWN PLANNER, READ THIS:
An innovative concept used successfully by Piperton was 'Proactive Retrofit Planning'. City Commissioners required an extra 25% capacity be designed into each decentralized system. This way they would be able to accommodate and retrofit any of the town's pre-existing homes on failing septic systems.

◀ *continued from page 3*

"Another reason the developers were happy with the town's choice was that the Bioclere system has a small footprint. That means the developer can utilize the maximum amount of area for residential lots" added Mr. Conrad.

"I think the re-use of the water for irrigation is going to be one of the most important benefits in the years to come"

Aside from the quantifiable wastewater treatment objectives, the city of Piperton achieved its goals in less measurable areas such as aesthetics and conservation.

An important benefit of the Bioclere units is their small footprint which makes them visually unobtrusive. Additionally, Bioclere treatment systems are both quiet and odorless.

Piperton is using the effluent for drip irrigation. "I think the re-use of the water for irrigation is going to be one of the most important benefits in the years to come so I'm glad we're ahead of the curve. Water conservation across the country is beginning to be a huge issue," added Mr. Conrad.

In conclusion, with AquaPoint's Bioclere technology, the city of Piperton achieved its goal of building infrastructure as they need to by having the developers put in additional units at a low cost. Piperton's decision to forge private/public partnerships has helped them develop their wastewater infrastructure.

"I would definitely recommend AquaPoint to other municipalities and engineers. We worked really well with them - their technical expertise and support were first rate. I don't know what else I could have asked for," said Mr. Conrad.

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City Gains Asset and Water for Irrigation with Decentralized Plant

LOCATION: Cave Springs, Arkansas
Planned 1495 home community
with downtown and golf course

Can you imagine a city receiving a brand new \$8.5 million dollar state-of-the-art wastewater treatment system without adding additional taxes or incurring any credit risk to the town? Cave Springs, Arkansas did precisely that.

On February 21, 2008, the city of Cave Springs, Arkansas, took title to a new asset – a wastewater treatment plant modular in design and scaled to the demands of the community. This was the result of an inventive public/private partnership to carefully develop land in an environmentally sensitive area. A mutually beneficial arrangement like this can only happen with cooperation and trust between government officials and the developers.

BACKGROUND

Tucked away in the northwest corner of Arkansas, the headquarters of three corporate giants are within 20 miles of one another: Wal-Mart in Bentonville, Tyson Foods in Springdale and JB Hunt in Lowell. Spurred by Wal-Mart's rise and the continued success of the other two, this region has become one of the fastest growing residential areas in the United States.

Because it is minutes from the Northwest Arkansas Regional Airport and within easy commuting distance to all of those cities, Cave Springs became the next small town to develop. As its name suggests, the rocky topography is filled with lakes, streams and, of course, caves, which are home to many endangered species including the Ozark cave fish, gray bats, cave crayfish and the bald eagle.

The plan included 1495 new homes, a golf course, a downtown and a secondary commercial area. The total area was about 1000 acres and would be divided into 10 separate subdivisions. Brett Hash, Owner of Northwest Services, LLC, was the lead developer who had the vision to forge this creative partnership that was designed to minimize conflict and benefit both the public and private sectors. He realized there was an opportunity to have a superior wastewater treatment solution for the entire area as well as capture water for irrigation.

"I started to investigate alternative wastewater treatment solutions for the areas I was building because the city had no money to hook up any of the planned developments to a central system," said Mr. Hash. "Initially, each developer was responsible for handling the wastewater in his own subdivision. I thought if we used one large decentralized system it would make more sense financially – kind of like getting a quantity discount."

"This is truly a good deal for everybody involved," explained Mr. Hash, who spearheaded pulling together the 10 separate subdivisions under one decentralized wastewater treatment system. Obviously, this new approach took cooperation and extra work between government officials and Mr. Hash. But the result was undeniably worth the effort.

Turning this idea into reality had its challenges. "As you might suspect, when this was first proposed there were lots of concerns and questions. Imagine 10 very successful business owners with strong opinions and big egos. Each developer was dealing with a multi-million dollar project and had a lot at stake. But, once they understood that we would get a better treatment system, have the opportunity to offer the city an asset AND save money, they realized this would be a win-win scenario. They accepted the technology and were very supportive," said Mr. Hash.

"All our wastewater is treated and disposed of right here, where it was generated. I think it's the responsible thing to do"
— BRETT HASH

Distributed Wastewater Infrastructure For

“Of course we looked at other companies. But either their treatment capabilities didn’t meet our needs or their O&M was more cumbersome and costly.”
— MR HASH

One of the key steps was to designate the area to be developed an Improvement District by the state of Arkansas. Because there was no existing wastewater infrastructure, the developer took the risk of building the treatment plant with the understanding that it would be sold to the city. The city was then in a position to issue a bond that would be covered by an existing user tax levied against each lot using the system.

“We had a terrific opportunity in Cave Springs to make a public/private partnership work. It allowed us to find the best treatment solution, fund it through a bond and ultimately create a revenue-generating asset for the community. Other states may use different names, but the concept behind “Improvement Districts” makes it possible to pay for decentralized wastewater treatment systems,” he added.

KEY CONSIDERATIONS

Beyond the initial hurdle of getting all the developers and city to agree to the plan, the actual implementation of the system was not difficult at all.

At full build out, the system will handle 412,000 gallons per day (gpd). Initially, however, only a small number of homes would be contributing wastewater to the system. According to Josh Lindell, Project Manager for AquaPoint, “Low flow rates can be problematic for some treatment technologies. This system had to be versatile enough to handle extreme fluctuations and still be easy to maintain and cost effective to operate.”

“Typically, the disposal method for treating this volume of wastewater would result in a surface water discharge either into a lake, stream or ocean. Because of the sensitive environmental issues with endangered species, such as blind

cave fish, Mr. Hash really wanted to discharge underground.”

There are several environmental advantages to using sub-surface drip irrigation because it:

- Provides additional treatment and natural filtration
- Captures water for irrigation
- Avoids sending wastewater downstream
- Protects wildlife

“That is a key difference here - we’re not sending anything to our neighbors down the creek. All our wastewater is treated and disposed of right here, where it was generated. I think it’s the responsible thing to do and people should be doing this everywhere,” said Mr. Hash.

THE AQUAPOINT SOLUTION

Because of the required hydraulic capacity, the AquaPoint design team determined their Lotus™-ActiveCell™ fixed film moving bed biological reactor (MBBR) treatment process was the best technology for Cave Springs.

Back in the late 80s, the Canadian government developed a new technology to improve the treatment capabilities of many of their multi-million gallon per day (MGD) municipal wastewater treatment plants. The goal was to develop a process that could expand easily to retrofit existing basins and perform cold climate nitrification. Years of research and development led to the creation of a fixed film, MBBR technology now known as ActiveCell.

AquaPoint’s Lotus-ActiveCell system uses this proprietary technology. It is scaled down and designed for the demands of the decentralized marketplace where flows tend to be measured as gpd instead of MGD.



Integrated Water Resource Management

In a Lotus-ActiveCell MBBR, microorganisms attach themselves to submerged moving plastic media forming a biofilm. Air is transferred into the water, mixing the media and providing oxygen to the bacteria. The biofilm absorbs, oxidizes and reduces the organic and inorganic materials in the waste stream.

“The flexibility, simplicity and efficiency of ActiveCell allows us to effectively value engineer and adapt the process for flows below 500,000 gpd” explained Mr. Lindell. “In fact, selecting technologies that have been effective on a large scale and packaging them for the decentralized market makes Aquapoint somewhat unique. Because we customize the design for each site, we tend to have economy of scale and Operation and Maintenance (O&M) advantages over competitors that try to scale small flow technologies up for larger applications.”

According to Mr. Hash, “We felt really good about AquaPoint’s technology and track-record. We did a lot of research and we found Lotus-ActiveCell was the best fit for our project for many reasons because it:

- Has a small footprint
- Can handle flow rates up to 412,000 gpd
- Is cost effective due to low life cycle costs
- Has simple installation requirements (modular vessels)

“Of course we looked at other companies. But either their treatment capabilities didn’t meet our needs or their O&M was more cumbersome and costly,” said Mr. Hash.

“We felt really good about AquaPoint’s technology and track-record. We did a lot of research and we found Lotus-ActiveCell was the best fit for our project.”
— MR HASH

“One of the key challenges for any community system designed to treat hundreds of thousands of gpd is managing the process cost-effectively at the beginning of build out when the flows are low and intermittent. The fixed film MBBR process is unmatched when it comes to simplicity, ease of O&M and efficiency especially under these conditions.

Because the biology adheres to the media and is retained in the treatment basin, the bio-reactor is self regulating and will adjust naturally over time to the organic and hydraulic loading on the system,” said J. Lindell.
“Suspended growth processes don’t have this luxury and

and costly to operate during a development build out.”

For the most part, the Cave Springs WWTP is comprised of modular pre-fabricated vessels. The Lotus-ActiveCell reactors are constructed of 100% stainless steel and many of the ancillary components and tanks are fiberglass. Using high quality materials ensures a long life cycle and saves the municipality from costly repairs and rehab in the future.

Another big part of the AquaPoint deliverable is providing remarkable customer support.

“I couldn’t have received better service from the people at AquaPoint. If I had a question in the morning, I had the answer in the afternoon. They supported us from the initial meetings in New Bedford, MA to being on site during the installation.

Project Facts:

Cave Springs, Arkansas
Case Study

Flow (gpd): 412,000

Flow includes 1,495 homes and commercial development

Treatment Standards:

	Pollutant	mg/l	
Influent	BOD ₅	150	BOD ₅ = Biological Oxygen Demand
	TSS	150	
Effluent	BOD ₅	15	TSS = Total Suspended Solids
	TSS	15	

Capital & Installation Cost Per Home: \$5,000.00

Estimated O&M Labor: 3 to 5 hrs/week

System Components:

STEP Collection
 Weir box/flow divider
 (2) Parallel Lotus-ActiveCell reactors
 (2) Parallel Clarifiers
 (2) Sludge holding / aerobic digester tanks
 Drip irrigation system

Electrical Consumption: (includes treatment & disposal systems)

Flow (gpd)	kWhrs/Mo	Cost/kWhr	Cost/Mo	Cost/Home/Mo
412,000	(+/-) 25,000	\$0.10	\$2,500	\$1.64



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have been selected specifically for their simplicity, natural stability, capital & life cycle cost efficiencies and regulatory acceptance. **AquaPoint is a 'Green Gazelle' company and compatible with LEED certification projects.**

I believe in this technology and think decentralized wastewater treatment systems should be used everywhere...because it's ecologically friendly and it's the best way to handle sewage cost-effectively."
— MR HASH

REFERENCE INFORMATION:

**Brett Hash, Owner
Northwest Services, LLC
bhash@aol.com**

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In fact, we had one small part that didn't work quite right and AquaPoint took care of it immediately and replaced the part without any question," said Mr. Hash.

RESULTS

To date only a small percentage of homes are currently on line as the developments are still under construction. But the savings of building a combined system netted a low capital equipment and installation cost of only \$5,000/home.

Like Cave Springs, many towns and counties across the country are including decentralized and distributed wastewater infrastructure in their water resource management plans. Using a distributed network of municipally operated systems allows communities to provide cost effective infrastructure when and where it is needed. The systems can be designed specifically to achieve the standards required by their surrounding environment and treated water can be used as a resource.

"I couldn't have received better service from the people at AquaPoint. If I had a question in the morning, I had the answer in the afternoon."
— MR HASH

The public/private partnership approach used by Mr. Hash and the city of Cave Springs makes it possible for any small community with limited resources to acquire assets and grow. "We think Cave Springs is a model for the way wastewater and water infrastructure will be built in US for years to come. It truly is a wining

scenario for all involved" said Josh Lindell.

Mr. Hash feels especially good about his efforts to bring all the developers together to put in the 'right kind' of wastewater

treatment system and be able to give the decentralized plant to the city. "They now have an asset they can use to generate revenue for other needed town services," he added.

"Honestly, I believe in this technology and think decentralized wastewater treatment systems should be used everywhere. The largest pipe we used was 10 inches. Compare that to the costs and land disruption to put in 'big pipe' sewer systems. I predict, over time, people will see the advantages and this kind of decentralized system will be heralded. It will be popular because it's ecologically friendly and it's the best way to handle sewage cost-effectively," stated Mr. Hash.

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Chincoteague

WASTEWATER ADVISORY COMMITTEE

October 2012 Newsletter

Neighbors, and Members of the Business Community:

The Town of Chincoteague is once again in the process of conducting a comprehensive review of wastewater treatment alternatives for the future. Studies have been done in 1976, 1988, and 2008. With each review the Town has decided that the time is not right for a centralized wastewater treatment system. Why are we looking at this idea again?

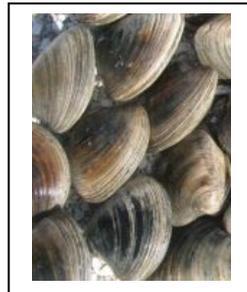
- 1) Virginia has changed the Health Code to require expensive individual lot septic systems that meet advanced technology standards
- 2) Chincoteague Bay water quality is critical to our local seafood/shellfish industry
- 3) A proposed town center development near Atlantic has asked the Town of Chincoteague if they would be interested in connecting to a regional wastewater treatment plant on the mainland

In order to address these issues, the Town Council participated with Accomack County in the preparation of a grant funded regional wastewater study, and appointed five (5) representatives to a Town advisory committee with the following project to be completed by June 2013

Project Goals

The committee will complete a 2 year work plan

- to review wastewater needs for the community;
- to review the preliminary engineering report dated March 2011, along with other studies or alternatives, and to present recommendations for action to the Town Council;
- to review and make recommendations on alternatives for a Wastewater Collection System and Force Main Alignment ;
- to review and make recommendations on alternatives for Wastewater Treatment and Disposal;
- to provide ideas and suggestions to the Town Council on areas to be provided with wastewater sewer service;
- to provide suggestions for acquisition of new properties for possible treatment plant or pump station site;
- to serve as a liaison to the Public and Town Council.



Town of Chincoteague Water and Sewer Facts

The Town currently serves approximately 3,550 lots with public water (2,500 residential, 1,000 commercial, 50 civic)

Groundwater from wells on the mainland is treated and pumped to Chincoteague along the Route 175 causeway Between ___ and ___ gallons per ___ are delivered to our year round population/businesses (4,000) and visitors (20,000) Sunset Bay Utilities extended a force main from their private treatment plant to help remove as much as 7,800 gallons per day from failing septic fields and to support existing downtown businesses and civic buildings

In the last 5 years, over ___ property owners on Chincoteague Island have constructed advanced treatment septic systems



The Chincoteague Preliminary Engineering Report (2011) tests the idea of a Phase One public wastewater service area to serve the business corridors along Main Street and Maddox Boulevard.

- ❖ Construction of collection system
- ❖ Pump station and force main to mainland
- ❖ Treatment in advanced wastewater facility
- ❖ Land application of clean water in conformance with State requirements
- ❖ Number of Phase One Connections
- ❖ Cost Analysis Necessary

How you can be involved

Committee Progress Report

The Chincoteague Wastewater Advisory Committee has collected information during presentations from the Atlantic Town Center developer, Virginia Department of Environmental Quality (centralized systems and disposal), Virginia Environmental Health Department (septic drainfields), Sunset Bay Utilities (private wastewater treatment), and Town Staff (research of similar communities and cost data).

A survey of business owners was completed to identify issues and support for the PER scenario. Presentation of informational newsletters to the public is proposed over the next several months followed by a general survey to inform the Committee and Town Council.

(Minutes from each of the Committee meetings have been posted on the Town website with the agenda of the next meeting)

Next Steps

- ❖ Workshop with Planning Commission to discuss zoning and development controls (October 9th)
- ❖

Wastewater Advisory Committee
21 June 2012
Informational Meeting Notes

Members Present:

Mr. Spiro Papadopoulos, Chair
Mr. Kelly Conklin
Mr. Scott Chesson
Mr. Mike Tolbert
Mr. Tommy Clark

Members Absent:

Mayor Jack Tarr

Guests: None

Staff: Robert Ritter, Town Manager
Harvey Spurlock, Public Works Director
William Neville, Planning Director

Public Present: (0)

Chairman Papadopoulos reviewed the agenda and noted one correction to the minutes of the May 17th meeting notes.

Summary/Conclusions on Business Owner Survey

Mr. Chesson informed the committee that a summary of the business owner survey was not yet completed. Chairman Papadopoulos requested that a brief report should be prepared to document the effort and share the results.

Comparison Study of Similar Communities

Chairman Papadopoulos reminded the committee that each member was going to break down the workload of reviewing research of information about similar coastal communities by comparing their solutions to the preliminary engineering report recommendations from the Clark Nexsen study. He suggested creating a matrix to evaluate the different factors to consider such as method of disposal, cost, etc. This is intended to help the committee come to a conclusion about what is the most likely solution for Chincoteague.

Town Planner Neville presented examples of a spreadsheet matrix of information and a graphic chart to compare and illustrate the direction that other communities have taken. A change from small rural towns with individual septic drainfields to larger communities that can afford to implement central wastewater solutions was highlighted. Reuse of treated wastewater at Block Island was the highest use of technology to meet water quality standards. Plotting the change in treatment systems for each community over time on the graphic chart was an experiment that identified a similar point of building the best system that the community can afford.

Committee members discussed the ideas and noted that if new technology was not used to upgrade wastewater treatment, then water quality would trend down with additional growth of homes or businesses. Town Manager Ritter suggested that this potential may be important to illustrate for grant funding agencies such as EPA or USDA. Chairman Papadopoulos commented that the committee's work to identify a best possible combination of treatment, disposal and cost will still need to be just a recommendation to Town Council that should explain all options.

The committee confirmed that its consideration of different technically feasible solutions cannot be completed without a full understanding of costs. Chairman Papadopoulos recommended a two step process so that cost alone does not drive the process. Mr. Conklin asked about the volume of water being considered and the possibility of reuse. Mr. Ritter discussed the previous proposal for a discharge to Fowling Gut, and the cost of another layer of infrastructure needed for reuse in irrigation systems. There was additional discussion of the potential methods of disposal such as direct discharge, indirect discharge, land application, deep well injection, and the need for approval of a backup plan.

Chairman Papadopoulos suggested that over the summer months, the committee should continue to review the research materials and be prepared for a work session in the Fall to evaluate the options.

A public information newsletter, similar to Chatham, was discussed. All agreed that the first of several newsletters should introduce what is going on with the committee, what will happen next, and how to get involved. To demonstrate a need for change, other than federal regulations, the committee suggested the unintended consequences of proceeding with only drainfields (t-shirt shops, unusable yards, and limited business opportunity) may help to describe the problem.

The Chatham example of answering frequently asked questions was supported. Mr. Tolbert suggested that adequate zoning controls would be needed. Mr. Conklin added that the cost for individuals to bring their drainfields into conformance with new regulations is a cost that may not be affordable for low income residents. Mr. Clark stated that it is important to know how far the public sewer system is proposed to expand – just to serve the commercial districts, or ultimately the whole island. A full description of the current private facilities, their capacity and utilization is needed according to Mr. Conklin. Mr. Chesson asked about water use statistics for both the Main Street and Maddox Boulevard corridors. Mr. Ritter explained the difficulty in comparing water use based on the quarterly tracking system for different parts of the Island.

Chairman Papadopoulos suggested that a workshop may be needed in October to pull these ideas together and work through the suggested matrix of options.

Status Report on Main Street force main

Public Works Director Harvey Spurlock reported that the private force main has been installed in Main Street that will extend service from the Sunset Bay Utilities treatment plant to certain downtown businesses. Mr. Clark confirmed that he has been designing the connection for his restaurant (2-3,000 gallon tanks with backup pump systems) and getting a health department decision regarding the capacity needed (One and ½ times amount needed). There was discussion about capacity of this private system. Mr. Tolbert suggested that after the system is up and running for several months with additional businesses connected, perhaps the operator could provide a presentation to the Committee about the private system.

Status Report on Health Department Response

The committee had requested additional information from the Health Department at a previous meeting which is included in the meeting packet. Permit information regarding the number of conventional drainfield systems installed or replaced is still not available.

Status Report on Atlantic Town Center

Mr. Ritter reported that a revision to the land use designation of the County Comprehensive Plan was still being considered by the Planning Commission. This was necessary in order for the County to review the Planned Unit Development (PUD) rezoning request. The applicant is considering an amendment to the application that would place both wastewater treatment and disposal onsite (not on a separate property in Atlantic).

Committee Member/Public Comments

(recording unintelligible)

The next meeting of the Committee will be on September 27, 2012 at 9am.