

# Village of Bald Head Island

## Council Meeting

September 21, 2007

**Councilmembers Present:** Mayor Larry Lammert, Mayor Pro Tempore Andy Sayre and Councilors Gene Douglas and Art Morris.

**Councilmembers Absent:** Councilor John Pitera

**Staff Present:** Village Manager Calvin Peck, Assistant Village Manager/Planning Director Chris McCall, Police Chief Richard Herring, Finance Director Deb Straub, Chief of Emergency Services Chip Munna, Tax Collector Dawn Reno, Utilities Director Ken Bowling, Public Works Director Ben Liddle, Village Attorney Charles Baldwin and Village Clerk Amy Candler recording the meeting.

**Others Present:** Bald Head Island Limited Director of Transportation Woody Fulton, Bald Head Island Director of Planning Jim Henry, Suzanne Dorsey with the Bald Head Island Conservancy and Ben Brown with the State Port Pilot.

**Citizens Present:** Approximately 45.

### 1. Call to Order/Approval of Agenda Mayor Lammert

Mayor Lammert called the September 20, 2007 Village Council Meeting to order at 3:00 p.m. Councilor Morris made a motion to approve the Council Meeting agenda as presented. In a voice vote, with Councilor Pitera being absent, all voted in favor.

**(Motion carried 4-0)**

### 2. Informational Presentation

#### 2.1 Presentation on Pond Usage—*Jim Cornett*

Mr. Cornett reviewed the Bald Head Island geology, explaining that we have essentially two “lenses” of freshwater on the island, an upper “surficial” layer, and then a deeper layer. There is approximately 38-40 feet of a fairly continuous clay layer which divides the upper from the lower lens of fresh water. Surrounding and below those two lenses are of course the saltwater bodies of the Atlantic and Cape Fear River. He noted these lenses of water help keep the salinity at bay. When the water comes out of the wells it goes to the water plant and is augmented by Brunswick County water, when additional water is needed. After the water leaves the water plant it goes through homes, then back to the treatment plant. After it leaves the treatment plant it is discharged into Ponds 4 and 5. He noted that this represents a good hydrologic cycle and shows how Bald Head Island is very self sustaining with respect to water; as long as there is plenty of water in the system, we can support ourselves, and when we cannot, we have the backup of the waterline.

Mr. Cornett continued, noting that the study was done due to concerns about chloride levels and the RO process to treat the water. When the fresh water from the wells comes to the water plant, the RO system squeezes the cleaner water out and concentrates the mineral content in the raw water. Therefore what the RO system is doing is taking fresh water and making it fresher. However, the byproduct is the RO reject water. There were concerns that the reject water could be making the effluent ponds saltier. So he was hired by the Village to find out what impact RO reject was having on the island.

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 2 of 8**

The first goal was to document the RO reject water chloride impact to the surficial aquifer under BHI. Second was to investigate the perceived salinity impact to Irrigation Well #2 and third was to evaluate the full irrigation well network installed along the fairways adjacent to Ponds 3, 4 and 5.

Ponds 3, 4 and 5 are currently permitted to receive treated water from the wastewater treatment plant. The BHI Utilities is actively discharging into Pond 5, which is connected to Pond 4. Pond 3 has not been used for a number of years. Three analyses were conducted during the summer in June, July and August. They tested for temperature, pH, conductivity, total dissolved solids, total suspended solids, salinity and chlorides. They did not test for nitrates, as that is monitored closely by the Village Utility Department.

They found the pH was almost neutral. Pond 5 was the closest to neutral, whereas Pond 3 was highest. Conductivity was fairly low, solids were fairly high. This represents any mineral still dissolved in the water. Salinity was fairly low. Chloride was 315 parts per million (ppm) in the initial month, but in July and August it was 146 and 162, respectively, so the 207 average in the RO discharge was less than what drinking water standards require.

He showed a bar chart of average chlorides ppm for all of the individual wells and ponds. There were only two that went over 250, and they were IW-8 and 9, which are closest to the Atlantic Ocean.

They then took 3 bottom sediment samples to address the concern with high salinity on the bottom. They found it was less than 1/20 of what was in the water. There was no evidence of crystalline deposits in the bottom. Regarding chlorides, it was still far below state drinking level standards.

They took many groundwater samples to help determine the surficial aquifer health. In all ponds and monitoring wells, they found the discharge is below state drinking standards. The furthest wells from the ponds had the highest chloride ratings and higher salinity, which was as expected.

As far as flooding concerns, he noted that they saw a higher water table in Pond 3, though it was not being utilized for discharge.

He noted detritus buildup on the bottom of ponds is a concern that needs to be addressed – it can turn the surficial aquifer into impermeable “bathtubs” that will cause problems. Mayor Lammert noted this is being examined by the Village so the problem can be addressed.

Jim noted the following conclusions to his study:

- BHI is under a severe drought, so every drop is critical to hydro cycle.
- The RO reject was fresher than the naturally occurring water in the surficial aquifer.
- The RO reject water is supplying up to 80,000 gallons per day to recharge the Surficial aquifer.
- No evidence of elevated chlorides, salinity, or other negative impact to the

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 3 of 8**

surficial aquifer by the discharge to Pond 5 was found. It appears that the discharge to Ponds 4 and 5 is helping to keep the chlorides lower, salinity lower and saltwater intrusion at bay.

– Previous studies were noted, which utilized over 42 months of data, in which levels were shown over drinking water levels and more chemical testing was done, including nitrates. It was also noted that DENR studies had similar results. Therefore, as a result, Mr. Cornett was asked if he had confidence in his study, which utilized 3 months of data. He noted that he had every confidence in the data of his study because the samples were taken at the peak of year, when the most people were on the island, when discharge would be highest, and in the driest year in recent years.

– It was asked why there seem to be significant differences in clarity of the water between the three infiltration ponds and non-infiltration ponds. The infiltration ponds also seemed to have significantly more fish kills. Amphibians also appear to be less at the infiltration ponds. Mr. Cornett noted that scientist observe trends. Ponds 3, 4 and 5 are isolated from surface flow from other parts of the island. Other ponds are allowed to flow and be part of the extensive stormwater system. Pond 3 can be a very stagnant environment. He also noted that his understanding was that the recent fish kill was subsequent to a severe algae bloom. He also stated he didn't see a significant difference in the animal activity at the ponds when conducting the study. As mentioned earlier, there is a fine organic detritus buildup on bottom of Ponds 4 and 5, a lot of turbulent flow that might not be allowed to settle out – this may account for dinginess of water. Suzanne Dorsey of the Conservancy also added that in any small body of water, certain things will happen naturally, such as fish kills during heat waves, etc. While she noted anecdotal evidence is useful, there is a need to proceed toward conclusions following proper sampling protocols.

– One of the attendees, Ken Reckhow, a BHA member and a professor of Duke University with expertise in water quality issues, observed that he felt Jim's study was a solid, persuasive study that has some compelling evidence that RO discharge is not having a negative impact. An appropriately designed study could be done to address some of the additional questions that were raised, prior to actions the community can undertake.

– It was asked where else in the country is RO reject put back into the groundwater, as it is done on BHI? Mr. Cornett noted he does not know anywhere else it's appropriate for fresh water to be placed back into the ponds and where as much money has been spent to make fresh water fresher. He advised against putting it anywhere else, because of the value of water here on Bald Head.

Mr. Bowling of the Village of BHI Utility noted that while the water supply primarily comes from the wells, when we don't have enough, more is pumped in through the Brunswick County waterline. The need to do that will likely grow as the Island grows.

It was noted that the Village received a notice of violation because they are

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 4 of 8**

not permitted to discharge RO water into these ponds, but are doing so. Mr. Cornett explained that there is no permit for RO discharge, but RO backwash has been put into Pond 5 with the full knowledge of DENR for ten years. However, it only recently became an issue, not because of water quality, but because of an environmental “check box”. The goal on BHI is to maintain our freshwater resources, of which the Village feels the RO water is an important part, so they are working with regulatory agencies to resolve this issue.

Ms. Dorsey announced that there will be a public forum at the Conservancy Environmental Center on October 12<sup>th</sup> at 2:00 pm.

**3. Consent Agenda**

- 3.1 Approval of Minutes July 20, 2007, Regular Meeting  
July 20, 2007, Work Session

Meeting

*Resolutions*

- 3.2 A Resolution of the Village of Bald Head Island Adopting the Personnel Policy
- 3.3 A Resolution of the Village of Bald Head Island Declaring Certain Items to be Surplus Property and Authorizing their Disposition

*Agreements*

- 3.4 Interlocal Agreement with Brunswick County, North Carolina regarding Animal Control Services
- 3.5 Interlocal Agreement with Brunswick County, North Carolina regarding Fire Department Services

*Budget Amendments*

- 3.6 An Amendment to the Budget Ordinance for the Purpose of Carrying over Open Purchase Orders from Fiscal Year 2006-2007
- 3.7 An Amendment to the Village of Bald Head Island Budget Ordinance Amending the Middle Island Sewer Capital Project Fund (47) for the Implementation and Completion of Improvements Associated with the Middle Island Sewer Extension

Mayor Pro Tempore Sayre made a motion to approve the consent agenda. In a voice vote, with Councilor Pitera being absent, all voted in favor. **(Motion carried 4-0)**

**4. Old Business**

- 4.1 Update on Beach Private Sand Placement Efforts

Mayor Lammert reported that the Village is trying to move forward with all of the appropriate permits and processes relating to the private sand placement project.

- 4.2 Consideration and Approval of the Award of Contract for the New Maintenance Building for the Utilities Department

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 5 of 8**

Mayor Pro Tempore Sayre made a motion to approve and award the contract for the new maintenance building for the Utility Department to Ascent Construction Company.

4.3 Consideration and Approval of the Award of Contract for the Maintenance Building Expansion for the Public Works Department

Mayor Pro Tempore Sayre made a motion to approve and award the contract for the maintenance building expansion for the Public Works Department to Ascent Construction Company.

**5. New Business**

5.1 Financial Statement-August, 2007—*Debra Straub*

Ms. Straub reported that the Village received the local options sales tax and the hold harmless funds during the month of August. Most of the expenditures were lagoon related.

5.2 First Reading and Set a Public Hearing Date on an Amendment to Section 32-127, Dimensional Density and Structure Requirements Table 1, of the Village of Bald Head Island Code of Ordinances

The second reading and a public hearing regarding the proposed amendment to the Dimensional Density and Structure Requirements Table will be held at the October 26<sup>th</sup> regular meeting.

5.3 First Reading and Set a Public Hearing Date on an Amendment to Section 30-131, Installment Regulated of the Village of Bald Head Island Code of Ordinances

The second reading and a public hearing regarding the proposed amendment to the section of the Village of Bald Head Island entitled “Water Wells” regarding the permitting and installation water wells will be held at the October 26<sup>th</sup> regular meeting.

5.4 First Reading and Set a Public Hearing Date on an Amendment to the Utility Ordinance to Add Cross Connection Control Guidelines of the Village of Bald Head Island Code of Ordinances

The second reading and a public hearing regarding the proposed amendment to add the Cross Connection Control Guidelines to the Village Utility Ordinance will be held at the October 26<sup>th</sup> regular meeting.

**6. Committee Reports**

6.1 Beach

**Anne Kane**

The Beach Committee is scheduled to meet next week, therefore there I nothing to report at this time.

6.2 Finance

**John Knott**

There was nothing to report from the Finance Committee at this time.

6.3 Public Safety

**Don Tillman**

There was nothing to report from the Public Safety Committee at this time.

6.4 Public Works

**Richard Mesaris**

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 6 of 8**

The Public Works Committee did not meet this month, therefore there is nothing to report.

6.5 Transportation

**Wayne Lambert**

There was nothing to report from the Transportation Committee at this time.

**7. Monthly Reports**

7.1 Manager's Report

**Manager Peck**

Mr. Peck reported that Governor Easley issued a degree of drought on September 7<sup>th</sup>. Brunswick County was in a state of extreme drought. Therefore the Village enacted our water shortage ordinance. He advised that the Village Ordinance prohibits the use of outdoor potable water. He further advised that the Village has cut-off all outdoor irrigation, stopped washing vehicles etc.

Mr. Peck reported that the Middle Island sewer extension project began this week. He anticipates the project will take approximately 90 days.

Mr. Peck reported that there is a meeting scheduled for Monday afternoon at the Brunswick County Courthouse regarding the transfer tax.

7.2 Police Department

**Chief Herring**

Chief Herring reported that the Department had an uneventful summer season. He advised that the replacement for David Cox has been hired and is scheduled to be on board before the October 26<sup>th</sup> meeting.

7.3 Fire/EMS Department

**Chief Munna**

Chief Munna reviewed the monthly stats and advised that Howard McKeller has decided to join the Village on a fulltime basis.

**8. Comments, Reports and Questions**

8.1 Citizens

Ms. Hayden commented that if she understands correctly, the transfer tax that Brunswick County is proposing is to be used for roads and schools. She asked if Bald Head Island will benefit from this tax to any degree and is the Council taking a stand on this tax. Mayor Lammert commented that Bald Head Island will benefit from the transfer tax as it relates to improving the roads throughout Brunswick County. Mayor Lammert commented that he is in favor of the proposed transfer tax. Mayor Pro Tempore Sayre commented that he feels that Bald Head will not benefit for the transfer tax. Therefore he is opposed to the proposed tax.

There were three (3) members of the Middle Island Property Owners Association present and accused Mayor Pro Tempore Sayre of conflict of interests regarding his positive vote in favor of the Middle Island Sewer Extension Project. They added that Mr. Sayre had also signed for six (6) septic tank permits in Middle Island.

Mr. Peck cited the North Carolina General Statute 160A-275 which gave the true definition of conflict of interest. He added that Mr. Sayre conferred with the Village Attorney before voting on this topic and the Village Attorney advised that there was no conflict of interest with him regarding this subject.

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 7 of 8**

Mayor Pro Tempore Sayre added that he took the applications for septic tank permits to the Health Department in Boliva as a favor for Mr. Young because he was out of town and unable to deliver them.

Mr. McGowan asked who paid for the sewer extension on Oak Island. Mayor Lammert replied that their property owners were assessed.

Mayor Lammert added that the Council feels eliminating septic tanks on Bald Head is the best possible thing for Bald Head as well as the environment. He added two septic tanks on Middle Island have failed in the past few months.

Mr. McGowan commented that the owners of Middle Island are opposed to the extension of the sewer. He advised that he has a petition with 1/3 of the Middle Island property owners signatures in opposition to the extension.

Mr. Brawner asked if due to the drought conditions, if the Village is under a total water prohibition. Mr. Peck responded that the ordinance regulates the use of outdoor potable water.

Mr. Stevens commented that the Club is collecting rainfall data. He asked if the Village also collects the data. Mr. Peck advised that the Village monitors the State website on a daily basis to see if the drought restrictions have been lifted. He advised that the Village does not measure the amount of water in the aquifer. Mr. Peck added that the Village has enforced more stringent water restrictions than Brunswick County.

8.2 Bald Head Island Association—Bob Porter President

Mr. Porter reported that Joey Hill is leaving her position as the Association Manager. He advised that they received 70 applications and have narrowed it down to seven (7) applicants. Ms. Hill advised that the fall liter sweep is scheduled for October 6<sup>th</sup>.

8.3 Bald Head Island, Ltd.—Woody Fulton

There were no comments from Bald Head Island Limited at this time.

8.4 Bald Head Island Conservancy—Suzanne Dorsey

Ms. Dorsey had already exited the meeting therefore there were no additional comments from the Conservancy.

8.5 Mayor and Council

There was nothing else from the Mayor and Council at this time.

**9. Adjourn**

With no additional items for discussion, Mayor Lammert entertained a motion to adjourn the September 21, 2007 Council meeting. Mayor Pro Tempore Sayre made a motion to adjourn. In a voice vote, with Councilor Pitera being absent, all voted in favor. **(Motion carried 4-0)**

The meeting adjourned at 4:55 p.m.

**Village of Bald Head Island**  
**Work Session Minutes, September 21, 2007**  
**Page 8 of 8**

Approved:

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Larry Lammert, Mayor

Attest:

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Amy R. Candler, Village Clerk