



**City of Boiling Spring Lakes  
Board of Commissioners Workshop on Spring Lake  
June 10, 2014  
City Hall – 6:35pm**

***PLEASE TURN OFF CELL PHONES***

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**1. Attendance: In attendance at the meeting were:**

Mayor Craig Caster  
Commissioner Barbara Glidden  
Commissioner Mike Forte  
Commissioner Mary Stilwell  
Commissioner David Putnam  
Mr. Henry Wells, SunGate Design Firm  
City Manager Jeff Repp  
City Clerk Jane McMinn

**2. Introduction to the meeting:**

City Manager Repp indicated that we will be turning the meeting over to Mr. Henry Wells of SunGate Design who will present the preliminary study of Spring Lake and answer questions from the board and citizens. Based on the information tonight Mr. Wells will finalize his report and resubmit it to the city in its final form.

**3. Mr. Henry Wells, Sungate Design Group Presentation**

Mr. Wells explained that phase 1 was the gathering of historical information by speaking with the city staff. We looked at conservation service soil maps from 1939 which tells us the types of soil and how the water drains. We also looked at aerial photo maps from 1949 – 1966 this shows the development around the lake. We started phase 2 which is our field reconnaissance. We did a survey of the elevations and locations of the elbows, outlet points, and elevations on the bottoms of the pipe; we took elevations on the road to create our hydraulic model. We took elevations from both Spring Lake and the North Lake and determined there was more water going over the south rim than the north rim. We discovered that the lake itself starts out at about 2 to 4 feet deep at the edges and begins to gently slope off; the depth of the water goes to about 10 feet. This leads us to believe that this is a naturally occurring lake. We determined that the lake was there prior to development. We checked and surveyed five properties to determine where the iron markers were on the properties to determine whether they inside the water or outside of the water surface. We found irons on several of the properties were in the water as much as 10 feet, some of them 3 feet, we found only 1 iron that was not in the lake water. We found that in most cases the depth from the top of the water to the ground surrounding the irons ranged between 2.10 (tenths) of a foot to 1.5 feet. Based on this, the water level is now encroaching on properties that the town does not own.

On all the information that has been gathered on 201 acres and on the USDA guidelines the maximum normal size pond that you can put there would be almost 3 million cubic feet of volume. Based on the information we took the volume that is there now is approximately 6.3 cubic feet. This shows that you have a good amount of water coming into the pond from springs. We measured the elbows and elevation of the water surface and based on this information the amount of water going over the elbow amounts to about 26,000 cubic feet per day. We checked the elevations over 3 days and they were within a 1.10 to 2.10 (tenths) coming over the elbow.

We used the HydroCAD model and we put in all the information again and we looked to see how quickly the lake was draining down now and what we could do from the discharge structure to draw it down quicker. The way the elevation is right now it would take about 4 days to drain down. If we lowered by 5.5 inches it would take about 5 days to drain down. We looked at adding another pipe, we would have two 15" pipes and it would basically cut the drain time in half. The model shows that with about 5 inches of rainfall you will start to get overtopping of the road, especially with the pond elevated the way it is currently. We looked at what we could do to drain the lake faster. At the level it is right now it would generally take about 4 days to drain down. If we lower it 5 inches it would take about 5 days to drain. By adding another 15 inch pipe it would take 2 days to drain the lake instead of 4 days. By changing the water level this can increase the creation of sinkholes.

Our recommendation based on our summary and conclusions is the lake level be reduced to the original level it was pre July 2, 2013. Also we would recommend that an additional 15 inch pipe be added to drawn down Spring Lake more efficiently.

#### **4. Board Member Questions**

Mayor Caster and Commissioners Glidden, Stilwell, Forte and Putnam had several questions for Mr. Wells which he clarified and all members were satisfied with the responses regarding the permanent markers, irons in the lake, outlet structure, pipe levels, looking at the ultimate build out. The Board is looking for a permanent resolution for the flooding problem in Spring Lake.

Mayor Caster thanked Mr. Wells for the report and professionalism on behalf of the Board and City.

#### **5. Public Comment**

##### **Chuck Wojda ~ 161 No. Lake Dr.**

Mr. Wojda requested that the City do not do anything to increase the discharge into North Lake until the DOT cleans out their discharge in the pipes and the beaver dams have been removed. Due to heavy rains flooding roads and properties any increased water flowing from Spring Lake to North Lake will cause flooding until the pipes have been repaired.

##### **Dorothy Boyd ~ 1150 Grace Rd.**



Mrs. Boyd thanked Mr. Wells for the report and writing it at a level of understanding. Back in the spring of 2013 a group petitioned to have the lake level raised which the board voted to do. After the level was increased many property owners were flooded and a petition was then given to the board requesting that the level be lowered back to the original water level. The board voted against lowering the lake level. The engineering report states that the level of the lake is too high and needs to be lowered to the pre July 2, 2013 level. There were statements made by some citizens that the engineering report is biased.

Mrs. Boyd stated she was prepared to accept whatever the report recommended because it is science and the purpose of science is to take the bias out of the equation. Mrs. Boyd commented that she is hopeful that the board will follow the recommendations of the engineering firm they hired.

**David Crawford ~ 241 Ash Rd.**

Mr. Crawford stated that he emailed several questions to Mr. Wells and he responded to each question to clarify his response and stated that his report is based on the facts and information that was researched strictly on engineering data not what people wanted or didn't want. Mr. Crawford stated that the real question is how much has the lake level changed from 2005. We need to have a permanent elevation that it is the boards' responsibility to make their decision based on the facts. The board needs to come up with the right elevation for the lake.

**Hank Troszaniec ~ 413 No. Shore Dr.**

Mr. Troszaniec commented that what is very telling is the large population of public opinion about the boards' decision of eliminating the public works director position and hiring a city engineer, is now we have an engineers report and recommendation; this will be very telling on what we can expect in the future.

**Nancy Crawford ~ 241 Ash Rd.**

Mrs. Crawford asked if there was any historical data that proves that there was no property stakes ever placed in the water. Mr. Wells said nothing short of the 1960 record map. Mrs. Crawford replied if people improve their property is there a possibility that they could alter their shore lines with their property stakes in the water. Mr. Wells responded yes.

**Audrey Carathanasis ~ 1281 Spring Lake Dr.**

When the elbow was put in the elbow was under the water. When I bought that property in 1986 it was not under water it was at the edge of the water.

**Mark Stewart ~ 336 Cedar Rd.**

Mr. Stewart commented that the pipe in the lake was changed back somewhere in 2004/05 and that is when all the problems started and we have had issues since. Put the lake level back to what it was in 2004/05.

**Larry Modlin ~ 915 Holly Rd.**

When we replaced the pipes they were collapsing, the lake level was starting to increase and stay up because beavers had packed the pipes full. Both pipes were replaced at the same identical elevation; the water started to flow again, but within two or three weeks the beavers were back and packed the pipes again so we removed them. Hence the beaver cages were built and they have worked ever since.

**Robert Boyd ~ 1150 Grace Rd.**

I have looked out my back window for the last 15 years and my water has never been higher and my yard less than it is right now.

**6. Adjourn**

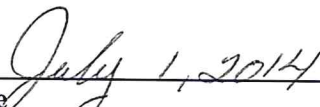
The workshop was adjourned at 8:55pm



**ATTEST:**

  
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Craig Caster, Mayor

  
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Jane McMinn, City Clerk

  
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Date