



Town of China

571 Lakeview Drive; China, Maine 04358
(207) 445-2014 info@chinamaine.org

Approved by Planning Board by a vote of 4-0 on April 13, 2021

Planning Board Meeting
Meeting held Via ZOOM
March 23, 2021
Begin 6:30 PM

Board members in attendance: Toni Wall, Randall Downer, Natale Tripodi, Scott Rollins
Board members not in attendance: James Wilkens
Attendees: Brent Chesley, Denise A. Bruesewitz, PhD

Code Enforcement Officer Jamie Hanson present

Board meeting opened by Chairman Downer
Pledge of Allegiance to the American Flag

Chairman Downer brought Board Member Tripodi into voting compacity.

Review/Approve Minutes March 9, 2021 Meeting

- Board Member Wall motioned to approve minutes as written.
- Board Member Rollins seconded motion.
 - Board Member Wall inquired into the name Denise. Should only be in shoreland.
All in favor. No further discussion.

Chair comments and priorities

- Chairman Downers advised he reached out to the Town Office and members of the Planning Board for status of comprehensive plan and if any other input was needed? Board Member Wall feels we do not need to do anything since nothing has been voted on. Chairman Downer questioned if it should come back to Planning Board if there are changes? Board Member Wall inquired if Tom Miragliuolo was still on the review committee? Chairman Downer states a few inadequacies were found by State that need to be addressed and they are waiting to hear back from the State. Chairman Downer advised that Mr. Miragliuolo has absolved himself from the review and other staff in the office will review. Board Member Rollins inquired if there were any major changes? Chairman Downer stated there are some changes from the current and they could result in potential substantive changes and feels they should be reviewed again.

Continued Discussion: Solar Ordinance

- Board member Rollins shared screen showing solar ordinance. Board Member Rollins advised they should consider adding in the track changes, to the document, to make it easier to read. Chairman Downer advised he would like to review section 7, Part D regarding the wording of “approved by the electrical inspector” and questioned if it should not read as “approved by an electrical inspector”? Board Member Wall advised



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should be “an electrical inspector. Board Member Rollins inquired if that would default to the CEO or would be someone would need to hired? Board Member Wall commented that they would need to hire as current CEO may not be certified electrical inspector.

- Chairman Downer questioned if the wording regarding removal of installations and decommissioning had been finalized? Board Member Rollins scrolled to section regarding decommissioning. Board Member Rollins advised wording may need to be clarified. Chairman Downer stated that he wanted to make sure the handling of the post/anchors had been taken care of. Board Member Rollins advised would fall under “all components” and would not prohibit farming after.
- Chairman Downer mentioned he would like to review the section where they used the wording “aspirational”. Chairman Downer stated that item 2, minimum rear yard, is not true since they do not have zoning districts. Board Member Wall confirmed China does not have zoning districts. Chairman Downer inquired how to properly word this section? Board Member Wall requested clarification of what is a rear yard in context to a solar farm and if there is a front yard setback? Board Member Rollins states it sounds more like an accessory use for a ground mounted solar and would be more representative of a residential subdivision. Board Member Rollins questioned if these are already structures, do they need to talk about the setbacks or would it fall under the current setbacks? Board Member Wall advised it appears in previous conversation that is what they were going to use. Chairman Downer suggested that they should define as structures and “meet all prescribed setbacks for structures as specified elsewhere in China Lake land use ordinance.” There was discussion on setbacks and the chapters of the China Land Use Ordinance pertaining to setback requirements for structures in various locations.
- Chairman Downer asked about section 8? Board Member Wall questioned what is section 5 referring to and should they add “of this ordinance” to wording? It was explained that the chapters are the ordinances and overall is the code.
- Chairman Downer commented regarding Section 9 – Abandonment. Board Member Rollins advised it would be hard to tell if operating since no movement and questioned how would it be known if operating or not? Chairman Downer suggested adding wording of “as determined by CEO”. Board Member Wall advised would need to have criteria. Chairman Downer questioned how another business would be determined in operation or not? Chairman Downer advised they will continue discussion on “abandonment” at another time.

Shoreline Stabilization

- Denise A. Bruesewitz, PhD
 - Chairman Downer provided introductions and a brief overview of Dr. Bruesewitz’s resume regarding her work looking at stream and water health. He provided information for a lake restoration project Dr. Bruesewitz was involved in, in New Zealand. Chairman Downer advised on the **Glion Project**. Dr.



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Bruesewitz also advised of her current NSF project regarding robotics and computational methods for understanding algae blooms.

- Dr. Bruesewitz explained there are 4 sites over 4 states that they are currently looking at, including China Lake in Maine, and lakes in New Hampshire, Rhode Island and North Carolina. She explained they are looking at blooms across several lakes including China Lake. Dr. Bruesewitz commented that she has looked into a bit of the policy piece but that is not her area of expertise lies. Dr. Bruesewitz advised her background is in water quality from tiny streams to up to lakes and has worked in many different types of systems. She explained the New Zealand project was a result of deep concerned regarding agriculture around lakes and the roles of an increase of dairy in the region. She continued that on a project in Texas, there was more of a focus on coast systems estuaries and how flood events impacted the carbon cycling and nitrogen cycling in the estuaries.
- Dr. Bruesewitz explained about how algae blooms can form. She advised they are interested in the mesotrophic lakes, or “middle”, that have some higher proportions of nutrients but are not yet high enough to constantly keep fulling these bloom events. She explained that they are interested in lakes like Great Pond & China Lake where these systems may be moving in the direction of having a higher nutrient state and more regular blooming events. Dr. Bruesewitz advised that her and a group of limnologists, those who study how lakes work and how blooms happen, are partnering with folks who have expertise in remote sensing, particularly hyperspectral imagery that uses a broader spectrum of data for analysis. She explained this would provider them the ability to understand blooms by using robot boats that swim on the surface of the lake, that learn and can collect data regarding chlorophyll, oxygen and other information along with collecting samples. Dr. Bruesewitz mentioned they did 3 flights over China Lake in September 2020 with her Colby students, but are not putting a timeframe as they are trying to time the flyovers to when there could be bloom events. She explained they would like to get some baseline data so they can obtain samples. She also advised the robotic team is working on diving drones that can collect data below the surface and at different depths. Dr. Bruesewitz explained they want to put together this data in a model of when, where and how blooms occur. She commented they will be working around China Lake this summer.
- Dr. Bruesewitz commented that she has not heard of or seen some of these types of structures that Chairman Downer advised her of before the meeting. Nor were some of her collaborators in Maine and New Hampshire familiar with them. Dr. Bruesewitz explained the importance of the zone where the water meets the land. She stressed that it is critical biologically active area because of the back and forth between wet and dry time. She continued that these transition zones are critical to protecting water quality and that anything that prevents that from happening or bypasses that zone would be harmful to water quality. Dr. Bruesewitz explained that in the broader picture, with the bigger plants that these



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would be important nursery areas for fish or other kinds of life that likes to live in the shallow areas. She reiterated that these areas are fundamental important and you would want to protect these areas of shoreland. Chairman Downer questioned how do you notice a change? Dr. Bruesewitz explained it can be difficult to notice, would take some time and went on to explain about nutrient uptakes along with seasonal variability to gather data. She also advised could look at similar studies, or could look at the differences at different location along the lake.

- Chairman Downer mentioned Dr. Bruesewitz has worked with Kennebec Water Authority. Chairman Downer explained that one of the challenges in China is they have 3 very different bodies of water, 3 Mile Pond, the East Basin, and the West Basin, all with very different physiographic characteristics. Dr. Bruesewitz advised she had heard that New Hampshire had recently developed Shoreland Water Quality Protection Act and she provided links to the webpages for the Board to review. She advised this could be helpful.
- Chairman Downer mentioned that the not require permitting section of New Hampshire could be potential helpful for China. Dr. Bruesewitz commented the reference line for the structures could be within that zone. Chairman Downer advised there is minimal protection by State of Maine and that China lake is the greatest asset and hugely important to the Town. He advised the goal of the modifications is to protect. Board Member Wall commented that the information is very helpful. Board Member inquired to Dr. Bruesewitz what is a reference line in her perspective as a limnologist. Dr. Bruesewitz explained it is the space regularly wetted by the water and leads to diversity of processes in that habit. There was some discussion on when the water levels may be rising, falling and how the water is moving. Dr. Bruesewitz explained about femoral pools and inundated areas and why they are important part of the ecosystem. She continued to stress that these ecological spaces, that have annual wetting and drying periods, are extremely essential for the future and need to be protected.
- Chairman Downer inquired into the stream order number if this would or be applied to the large number of springs that feed the China Lake? Dr. Bruesewitz advised stream order is basically a way to classify streams based on number of tributaries that feed them. She continued there is not an exact analogy for lakes and explained the lake landscape position is used and is based on where on landscape and how they are ordered.
- Board Member Rollins inquired to Dr. Bruesewitz as to what she sees as the biggest problem for China Lake? Would it be building or having impervious structures? Board Member Rollins spoke about reconstruction of a nonconforming down by the water and the lack of the buffer. Dr. Bruesewitz explained that they tend to focus on the nutrients that are already in the lake, the



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phosphorous and nitrogen. She explained that it takes a long time to for the lake to process and how to deal with that as the internal piece. She continued that the external piece is having a really protective buffer such as a vegetative, not having a human made. Dr. Bruesewitz stressed need to kept that conductivity between the water and the land. She advised any kind of disturbance in the water shed, can escalate the problem such as moving of soil also moves phosphorous. This all feeds into escalating the problem of blooms. Chairman Downer inquired to Dr. Bruesewitz if the data collected from the research project her and her team are conducting on will be public? Dr. Bruesewitz advised the information will be public.

- References:
 - <https://sites.google.com/site/denisebruesewitz/home/postdoctoral-research>
 - <https://www.des.nh.gov/land/waterfront-development>
 - <https://www.des.nh.gov/protected-shoreland-faq>

CEO Report

- CEO Hanson stated that he will need to review information and resources provided by Dr. Bruesewitz. He also advised that he will be emailing some questions to Dr. Bruesewitz regarding fire road maintenance and if they are protecting the resource correctly. CEO Hanson explained there is one project currently that is parallel to the lake shore. He will email the responses to the group.
- CEO Hanon advise he has issued 2 new building permits for residences. He continued that he has received 5 permit requests in the last 3 weeks and has been busy with inspections. CEO Hanson feels the ordinance is kind of urgent to get into place with all the new real estate sales.
- CEO Hanson explained he has had a change in mindset regarding retaining walls protecting the shoreline.
- Chairman Downer questioned progress of Little Learners daycare center. CEO Hanson advised there has been no change and will looking into again soon.
- CEO Hanson advised ready to issue building permit for Nichols Storage Unit project. States they are looking at starting the 2nd week of April and wants to make sure conditional use is correct There was discussion on the conditional use permit for the Nichols storage unit project and what was previously approved.

Future Schedule and Adjourn

Next Planning Board Meeting: April 13, 2021

Motion to adjourn meeting made by Board Member Wall

Motion seconded by Board Member Tripodi



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There was no further discussion and the motion to adjourn was unanimously approved.

Respectfully Submitted,
Dawn Kilgore
Planning Board Secretary