

ONONDAGA CIVIC DEVELOPMENT CORPORATION
Regular Meeting Minutes
August 22, 2019

The Regular meeting of the Onondaga Civic Development Corporation was held on Thursday, August 22, 2019 at 333 West Washington Street, Syracuse, New York, 13202, in the large conference room on the 1st floor.

Matthew Marko called the meeting to order at 8:35 am with the following:

PRESENT:

Matthew Marko
Alison Miller
Kimberly Townsend
Michael LaFlair

DELAYED:

Gerald Albrigo

ABSENT:

Ben Dublin
James Jordan

ALSO PRESENT:

Robert Petrovich, President/CEO
Nate Stevens, Treasurer
Karen Doster, Recording Secretary
Genevieve Suits, Office of Economic Development
Chris Andreucci, Harris Beach
Carolyn Evans-Dean, Office of Economic Development
Emily Long, Office of Economic Development

APPROVAL OF REGULAR MEETING MINUTES JULY 25, 2019

Upon a motion by Michael LaFlair, seconded by Alison Miller, the OCDC Board approved the regular meeting minutes of June 13, 2019. Motion was carried unanimously.

TREASURER'S REPORT

Nate Stevens gave a brief review of the Treasurer's Report for the month ending July 2019.

Upon a motion by Alison Miller, seconded by Kimberly Townsend, the OCIDA Board approved the Treasurer's Report for the month of July 2019. Motion was carried unanimously.

PAYMENT OF BILLS

Nate Stevens gave a brief review of the Payment of Bills, Schedule #83.

Upon a motion by Kimberly Townsend, seconded by Michael LaFlair, the OCDC Board approved the Payment of Bills scheduled #83 with General Expenses being \$10,613.15. Motion was carried unanimously.

CONFLICT OF INTEREST

Conflict of Interest was circulated.

Matthew Marko stated he is the Chair of SUNY ESF Board of Trustees and asked if he has a conflict. Chris Andreucci stated that is a conflict and he will not be able to participate in discussion or vote. He stated the bylaws require a majority vote and 4 votes would be needed. (Only 4 Board Members in attendance at this time)

Kimberly Townsend asked if unanimous written consent is an option. Chris Andreucci stated no.

STATE UNIVERSITY OF NEW YORK COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY – DEVELOPMENT OF SATELLITE TECHNOLOGY TO PROTECT THE WATERS OF ONONDAGA COUNTY LAKES

Neil Murphy stated that he and Giorgos Mountrakis are faculty members in the Department of Environmental Resources Engineering at ESF. He stated Giorgos is the expert on remote sensing and had the opportunity to apply remote sensing to a number of environmental issues both domestic and worldwide. He stated they can apply this technology to our lakes in Central New York to find the early onset of a harmful algae bloom and respond to that with appropriate precautions to treatment of potable water. He stated then potentially get some treatment systems that could address the initiation of the bloom and maybe cut it off. He stated he serves on the Skaneateles Lake Association and heads the nutrient management committee for the SLA. He

stated he has been very involved in the issue of the harmful algae blooms on Skaneateles Lake. He stated at the same there should be concern with Otisco Lake which is a source of water for the OCWA. He stated they can see the onset of activity of an algae bloom on the lake but not confirmed. He stated we tend to get the blooms late August or in September.

Neil Murphy stated the algae blooms tend to have rapid growth once they get started and can do significant harm to people, animals and the ecosystem. He stated it can have a dilatory effect on the use of any water. He stated when it starts it has an oily green sheen on top of the water and once the bloom gets taken off you can see the large algae biomass created. He stated the organism, which goes back 2.5 billion years, is called cyanobacteria and is both a savior and a curse. He stated through photosynthetic cyanobacteria creates the oxygen we breathe and at the same time it is now raising havoc with waters throughout the US and the world. He stated we need to work hard to address that issue. He stated one of the toxins it produces is made up of 7 amino acids and is one of the most toxic substances we have on earth. He stated it is a liver toxin and suspected cancer causing agent. He stated there are other products that are produced by Cyanobacteria. He stated it is a very cagey type of organism and adapts very quickly.

Kimberly Townsend stated the DEC website is reporting 3 blooms on Otisco Lake. Neil Murphy stated they are isolated and if we can advance the notice of that, there is technology that can be used to tackle a small area. He stated the real thing is getting early notification.

Neil Murphy stated causes of the blooms is agricultural runoff. He stated Central New York lakes are nested in between agricultural areas. He stated phosphorus and nitrogen is what this bacterium wants. He stated bird droppings can create a problem as well. He stated the critical thing is climate change because our water temperatures are increasing. He stated the amount of sunlight particularly late summer and September is very intense causing the photosynthetic activity to get started. He stated we now get rainfall in intense events not a steady rainfall like in the past causing agricultural and urban runoff to increase to our lakes. He stated the blooms create harm by creating the toxins affecting humans, fish, and aquatic organisms. He stated when the blooms happen you can't drink the water, you can't swim and you can become ill if you eat any fish or shellfish that have been in contact with the algae toxins. He stated they also cause depletion of oxygen within the water which creates its own set of problems. He stated HABs (Harmful Algae Bloom) poses a significant threat on economic activity particularly in the

Finger Lakes region and CNY. He stated tourism in the Finger Lakes region is a \$3 billion a year industry. He stated one of the real risks are reduction in property values. He stated Owasco Lake was looked at and concluded the algae blooms in Owasco Lake could reduce property values by 7-14%. He stated that affects the state and local taxes in derivative issues. He stated he is very concerned about the City of Syracuse water supply. He stated the City has a filtration waiver so they don't have to filter the water if they meet certain criteria outlined by the Health Department. He stated there was one significant bloom in the summer of 2017. He stated if we were to get successive blooms there is a high probability the waiver could be pulled. He stated if it is pulled it could be in the range of \$150,000,000 to build a water treatment plant. He stated OCWA has a well-designed facility in Marcellus. He stated if there are significant successive blooms it could result in increased operating costs and maybe some additional capital costs to address the toxins. He stated this is the issue in New York State. He stated depending on the year there are about 100 to 125 lakes that have recorded harmful algae blooms. He stated it is becoming a bigger problem in New York State, nationally and even globally.

Giorgos Mountrakis stated they are proposing a demonstration project where they are using a lot of the technology they have in house to address the algae detection. He stated looking at it from the economic perspective; they are going to try and minimize the risks for real estate, tourism and filtration waiver and at the same time generate new business with technology they develop. He stated he works closely with NASA and they have a wide selection of satellites that fly around on a daily basis acquiring data. He stated the technology they have developed in house at ESF takes an image into something where you can see the blooms. He stated through processing they can extract the blooms, locate warning system and quantify the damage and extent of the HABs. He stated they are developing the demonstration project to see the Finger Lakes but the business case is once the technology is developed you can take it anywhere and apply. He stated in addition to working on the problem they will partner with industry and government so they are not just developing the demonstration but actually seeing how it can be used by government and academia. He stated they have a wide range of partners to do this including O'Brien and Gere, SRC and Airbus Aerial who is a subsidiary of Airbus. He stated Airbus has interest in this technology because they fly their own satellites but also fly their own high altitude drones. He stated they have close relationships with NASA using some of their supercomputing services. He stated ESF has a close relationship with DEC. He stated the idea would be to develop this but put it into action that DEC can use. He stated they also work closely with local organizations

like Skaneateles Lake Association, the City of Syracuse and Onondaga County, specifically the Office of the Environment to propagate the results. He stated they have partnered with CenterState CEO as well working closely with Ben Sio through an Upstate Revitalization Initiative grant they are pursuing. He stated they are also working with NUAIR which is an alliance located in Syracuse mostly concentrated on business development around drone technology. He stated with that they hope to develop the demonstration project and it is a 2 year funding request. He stated part of it is for developing the technology but it is also to communicate the technology to the partners to see how to move it to the next step.

Alison Miller asked after the development of the technology what is the answer to stop the spread or is it to contain it. Neil Murphy stated the first part is knowing and having records of where in a lake it initiates. He stated where it initiates tells about where the sources of phosphorous and nitrogen are. He stated if they can understand the patterns of where the blooms are kicking off they can focus both on mitigation of nutrients going into the lake in those locations. He stated as they go forward and learn more they would be able to use technology to address a bloom right at the onset. Giorgos Mountrakis stated the Holy Grail is to move to prevention and that is where the satellites come in. He stated they have historical data from satellites that go back 20 to 30 years so they can see conditions like the temperature of the water, wind speed and where the blooms happened in the past which will help understand the drivers to have a warning system for the future. Neil Murphy stated we can potentially contract with Airbus Aerial so they are focusing on our two lakes of major concern with their satellites and high altitude drones.

Chris Andreucci asked how they anticipate the draws of the \$100,000 over 2 years. Giorgos Mountrakis stated it was close to 50/50 but could be 60/40. Genevieve Suits stated they don't want to be tied to doing exactly 50/50 each year because one year they may get more students working on it versus the other.

Kimberly Townsend asked if funding technology is something OCDC typically does. Robert Petrovich stated yes. He stated this is obviously something the County Executive spoke of, he is supportive and would like to see this move forward. Kimberly Townsend stated this has a huge impact potentially on real estate values and tourism which is very important. Neil Murphy stated both the County Executive and the Mayor have been very supportive of all the efforts.

Chris Andreucci asked if this is at all related to the Skaneateles Lake Association grant approved. Matthew Markos stated the 9 Element Plan theoretically could be in the long run. He stated the information will be shared and will be shared with New York State.

Matthew Marko stated the information will become public. Neil Murphy agreed.

Matthew Marko stated it has been an honor being part of the environmental resources and faculty and work with both Neil Murphy and Giorgos Mountrakis's on course work with students. He stated Giorgos' work is integrated across the curriculum in many different ways. He stated Giorgos is working on the satellite/aerial imagery aspects where as Ms. Quackenbush heads up the geospatial side. He stated the GIS capabilities are needed. He stated ESF is a great nexus of opportunity between the programs.

(Gerald Albrigo arrived at meeting.)

Matthew Marko gave a summary of the ESF presentation to Gerald Albrigo.

Upon a motion by Alison Miller, seconded by Kimberly Townsend, the OCDC Board approved a resolution approving Economic Growth Funds of \$100,000 for the State University of New York College of Environmental Science and Forestry – Development of Satellite Technology to protect the waters of Onondaga County Lakes project. Matthew Marko abstained. Motion was carried unanimously.

Robert Petrovich asked if there will be a contract. Chris Andreucci stated yes.

Matthew Marko asked when the next appropriate time for ESF to report back on the progress of the research. Neil Murphy stated some time in November after they have seen what has happened relative to blooms in August and September.

Giorgos Mountrakis stated it also depends on how quickly the contract can be set up. Chris Andreucci stated the contract will take about a week.

Matthew Marko stated it can be first quarter of 2020. Giorgos Mountrakis stated they can coordinate with the Director of the Office of the Environment and give them informal updates as they move along.

Upon a motion by Matthew Marko the meeting was adjourned at 9:12 am. Motion was carried unanimously.


Genevieve A. Suits, Secretary