

**MINUTES OF REGULAR SESSION  
HIGHLAND CITY COUNCIL  
MONDAY, AUGUST 1, 2016**

City Clerk Bellm called the Regular Session to order at 7:00pm. Council members Schwarz, Frey, Bellm and Nicolaides were present. Others in attendance were City Manager Mark Latham, City Attorney John Long; Assistant City Manager Peck, Directors Gillespie, Korte, Rosen and Schoeck; Lt. Conrad, EMS Captain Wilson, WTP Operator Gary Pugh, Latzer Library Director Kim, Deputy City Clerk Hediger, City Clerk Bellm; 3 citizens; and, one member of the news media.

With the absence of Mayor Michaelis, City Clerk Bellm requested a motion to appoint mayor pro tem. Councilman Schwarz made a motion to appoint Councilwoman Bellm as mayor pro tem in the temporary absence of Mayor Michaelis; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried.

**MINUTES**

Councilman Schwarz made a motion to approve the minutes of the July 18, 2016 Regular Session as attached; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried.

**PRESENTATION**

Peter J. Berrini, of Berrini & Associates, LLC presented a summary of the findings of his preliminary evaluation of the water quality of Highland Silver Lake, as detailed in the report provided “Evaluation of Highland Silver Lake Water Quality Conditions, Concerns & Enhancement Options” [July 2016]. Mr. Berrini reported he has been involved with the lake for a little over twenty years. With this project, we wanted to evaluate the current and historical water data available; summarize conditions of the watershed and lake; and evaluate the potential options for reducing the phosphorus loading the blue-green algae in the lake. Site 1 is the area by the dam. Sites 2 and 3 closer to and north of Interstate 70, respectively. Site 1 is at the deepest point of lake, near the water intake. Several things were done as a result of the lake shoreline project. Shoreline stabilization and restricting livestock into the lake have both helped. The last Clean Lake Study was in 2005. This report uses Illinois EPA 2009 & 2014 data from the lake. In comparing the historical data, we looked at total phosphorus at the surface and chlorophyll. The Secchi disk transparency measurement uses a black and white disk that is put into the water and measures at what level we lose transparency. In some areas, this was as little as four inches. Chlorophyll a is associated with blue-green algae, which is the least desirable of all algae. Physical, chemical and biological data obtained from sampling are used to calculate the degree of eutrophication, or the trophic state, through the calculation of levels of concentrations in a lake. Lakes that have a mean Trophic State Index (TSI) greater of 50 and less than 70 are characterized as being eutrophic, and greater than 70 TSI is hyper-eutrophic. The historical TSI values suggest that Highland Silver Lake is strongly eutrophic to hyper-eutrophic. These conditions are very productive and fertile with low clarity and shallow

Seechi depth when surface chlorophyll and phosphorus concentrations are high, and Seechi depth is low. These conditions are very productive for heavy summertime algal blooms, noxious surface scums and extremely low water clarity. The numbers from the 2009 and 2014 studies have been pretty consistent, due to persistently high phosphorus and suspended sediment present. Phosphorus levels and Seechi depth are consistently hyper-eutrophic, and chlorophyll in the eutrophic range. In 2014, IEPA confirmed microcystins were present at Site 1 and at the water supply intake. We need to find a way to reduce those numbers.

Achievable potential projects Mr. Berrini proposed to help reduce these levels include restoration of peninsula, which has eroded away. We can use that peninsula to filter the water naturally, by anchoring a wet-plant island, which is tricky, because of the lack of transparency, but it would allow for the plants within naturally filtering the water and providing nutrients back into the water. Additional shoreline stabilization of eroded banks should continue to be implemented on a selective basis. Another option is a silt curtain system. While we do not want to focus on that too much, it is an option; however, there are a lot of maintenance issues and costs associated with them. Years ago, we discussed dredging a fifteen-acre area to minimize remobilization of soft nutrient rich sediment. He estimated a minimum of 75,000-80,000 cubic yards of sediment. Dredging in this area would minimally impact sporting activities and wildlife.

In order to address the issue, you have to pinpoint areas and projects. Mr. Berrini showed aerial photos of neighboring lands and development of a gully that has formed from 2007 to 2015, pointing out that all of that sediment goes into the lake. This particular property is in a floodplain, which CRP funds could easily be assessed to, taking this land out of tilling and planting, which contributes to the phosphorus loading into the lake and sediment. Stream bank erosion is a contributor also.

Action ideas Mr. Berrini specified were to repair the two inoperable Solar Bees, so that all four units can circulate the water, making it harder for blue-green algae to grow. When fully operational, these units can limit blue-green algae dominance and have been found to reduce taste and odor problems in water supply lakes. Plan and implement the restoration of the eroded peninsula located north of I-70. Dredge 80,000 cubic yard of soft sediment from the north end of the lake. Complete a reconnaissance survey to identify locations of reoccurring gully erosion. From looking at aerial shots over time, Mr. Berrini stated he could easily find twenty. Coordinate with Madison County SWCD to promote the use of cover crops and conservation tillage practices. Identify a minimum of five specific stream bank erosion sites, evaluate, and prioritize for planning and implementation. Actively participate in the IEPA Volunteer Lake Monitoring Program (VLMP) and monitor contributory flows. In 2005, we monitored what was coming into the lake, because it was part of the Clean Lakes Project. It has not been done since.

Councilman Schwarz asked what the Solar Bees are. Mr. Berrini explained those are units that sit on the water, using solar power to circulate the water. The solar collector gives it power to draw in warmer water from the surface of the water and allows for the cooler water to surface, which aerates the water, disrupting the climate for blue-green algae to form and thrive. Councilman Schwarz asked what role phosphorus plays. Mr. Berrini explained phosphorus when readily available make the water very productive in promoting growth of blue-green algae. Even fish have trouble thriving and surviving in waters where there is a lot of algae growth. Reducing these levels would be in the best interest of the water quality. There is no silver bullet. It has to be attacked from multiple directions, because the water quality is at a very degraded state. Councilman Schwarz noted that dredging of the lake is a suggestion, which was brought up before. It is not something that needs to be done though. Mr. Berrini acknowledged I suggested it several years ago. I am strongly recommending it, at this point. The Solar Bees are not going to reduce algae. They only make it difficult for algae to grow. Taking land out of tillage and putting it into CRP could be a partnership between county funding, the city and the landowner. There are some positive things happening towards the north end of lake with natural habitat, which

provides good learning environments and wildlife. Things around the lake are going wonderful and are beautiful; but the quality of the water is eroding.

Councilwoman Bellm asked if we are going to have this on the agenda to talk about. City Manager Latham replied yes. We can look at prioritization of these items. He recalled, last year, when we had the oil spill into the lake, we did a flyover with Senator Shimkus. Senator Shimkus stated he would look at helping us to improve the quality of water with some federal funding, if we could provide them with a study. We have the study in a report now. In the original lake program, we did a lot of projects to fix erosion into the lake at the north end. Now we need to start with getting estimates for repair of the Solar Bees and identify some of the property owners that we need to work with around the lake.

## **PUBLIC FORUM**

### Citizens' Requests and Comments:

No comments or requests brought forth by anyone present.

### Requests of Council:

No comments or requests presented by the council members.

### Staff Reports:

City Manager Latham reported we anticipate the contractor making the August 10 deadline for finishing the Troxler Road multipurpose trail project.

We have a meeting scheduled with the contractor for the Walnut Street Resurfacing project, for next week.

The bids results came back in, today, for Sharpshooters Trail at about \$850,000. That came back in about \$50,000-60,000 less than anticipated.

## **NEW BUSINESS**

Award Bid #PW-03-16 for the Street and Alley Storage Building – Councilman Schwarz made a motion to award Bid #PW-03-16 for the Street and Alley Storage Building to E.A.H.C. Structures, of Effingham, IL, for the amount of \$89,970.00 as attached; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried.

Approve Notice of Municipal Letting for Bid #PW-06-16 the Silver Lake Boat Ramp and Storage Building project – Councilman Schwarz made a motion to approve Notice of Municipal Letting for Bid #PW-06-16 the Silver Lake Boat Ramp and Storage Building project as attached; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried.

## **REPORTS**

Approve Warrant #1029 – Councilman Schwarz made a motion to approve Warrant #1029 as attached; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried.

Councilman Schwarz made a motion to temporarily adjourn this regular session to enter into executive session under the Illinois Open Meetings Act under 5 ILCS 120/2(c)(11) to discuss litigation; seconded by Councilman Frey. Roll Call Vote: Schwarz, Frey, Bellm and Nicolaides voted aye, none nay. Motion carried. Motion carried. Meeting adjourned at 7:55pm.

Mayor pro tem Bellm reconvened the Regular Session at 8:07pm. Council members Schwarz, Frey, Bellm and Nicolaides were present. Also present were City Attorney Long, City Manager Latham, Director Schoeck, Deputy City Clerk Hediger, and City Clerk Bellm.

Mayor pro tem Bellm stated nothing discussed in the executive session would be acted upon in this open session.

Councilman Schwarz made a motion to adjourn; seconded by Councilman Frey. All councilmembers voted aye, none nay. Motion carried and meeting adjourned at 8:07pm.

Peg Bellm, Mayor *pro tem*

Barbara Bellm, City Clerk