



STORMWATER COMMITTEE MEETING
July 19 2011 ♦ 5:00 o'clock p.m.
Town Council Chambers ♦ Town of Surfside Beach

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1. CALL TO ORDER. Mr. Harbin called the meeting to order at 5:00 o'clock p.m. Members presents: Chairman Harbin, Vice-Chairman Sine, Mr. Harth, Mr. Mabry, Ms. Ross. Members absent: Mr. Kohlman, Ms. Lane-Laveglia. A quorum was present. Staff present: Building Director Donevant, Public Works Director Adair. Others present: DDC Engineer Sanford, Town Clerk Herrmann.

2. PLEDGE OF ALLEGIANCE. Mr. Harbin led the Pledge of Allegiance.

3. MINUTES APPROVAL. Mr. Sine moved to amend the minutes of the January 18, 2011 meeting with a correction on page 2, paragraph d, next to the last line "determined by the 12,000 acres" to "determined by the 1,200 acres." Mr. Harth seconded. All voted in favor. **Motion Carried.** Mr. Sine moved to approve the January 18, 2011 minutes as amended. Mr. Hart seconded. All voted in favor. **Motion Carried.**

Mr. Sine moved to approve the minutes of the April 19, 2011 meeting as submitted. Ms. Ross seconded. Mr. Harbin noted the correct spelling of Ms. Wood's name is L-E-I-G-H. All voted in favor. **Motion Carried.**

4. DISCUSSION.

A. Harbor Lights – Ken Harth & Jackie Donevant. Mr. Harbin explained that a discussion was held at the June workshop about Harbor Lights. The committee's perspective almost exclusively concerns lake water quality. Mr. Harth said Ms. Donevant was very helpful. He looked at some surveys and also talked with residents that lived around the lake. The impression he got was that the town owns a small strip of land around the lake. Ms. Donevant said the town does not own any land around the lake; the lots actually go right to the edge of the water. Each lot on the lake according to DDC's plan has to submit a stormwater plan, a tree plan, and other such information so that everything is not run off into the lake. Mr. Harth asked if the town has access to the lake. Ms. Donevant said the town has two 20-foot drainage easements. Mr. Harth asked if adjacent green areas were required. Ms. Donevant said no, as long as the impervious maximum was not reached.

Mr. Sanford, from DDC, the company that worked on the Harbor Lights project about six years ago said the original subdivision plan required that all lake-front lots have their own stormwater system. Front yards were supposed to drain into the street; they couldn't point discharge, basically there had to be a green space, sod on the lawns, a percolation system or some other filtering system in the back yard before discharge went into the lake. A system was in place so town staff could review the trees and storm drainage for each lot. Mr. Harbin asked if the same approval applies when the property changed ownership. Mr. Sanford said yes; the plat was recorded based on the minimum requirements stated. For clarification, he said that no houses were constructed on the lake lots in Harbor Lights as yet. Mr. Harbin understood that the developer was changing the floor plans, and had to re-grade the lots. He asked if that had separate approval. Ms. Donevant said yes; a different foundation type had to be used, because the developer could not meet the 18-inch requirement. The first stormwater plan for the lake was just received by staff, which will be sent to Earthworks for an engineer's approval. Ms. Donevant will approve other aspects of the plan. Based on the initial review, it appears to be a good plan and she believes it will work. Mr. Sanford said the plan basically conforms to the original plan. Mr. Harbin asked if green space would be maintained, and if the owner would be responsible for discharge. Mr. Sanford said the intention was for the lake bank to maintain its natural vegetation to help prevent erosion. There is between 20- to 30-feet of grass sod between the house and the lake. Mr. Harbin said most of the lots near Highway 17 had been cleared, and asked if the lots nearer to the water had been cleared. Mr. Sanford said no. Mr. Harth said those lots had to be maintained with a natural vegetation border and asked if sod could be placed to the water's edge. Mr. Sanford said according to the plan he just saw, it was not going in front of the silt fence, which is established between 10- to 15-feet along the bank.

*Poplar Drive
10/18/2011

Amended per Consensus
D. Herrmann

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5. PUBLIC COMMENTS.

"Bob Childs, 14th Avenue North. Mr. Chairman, I want to thank the committee for everything they are doing. There, on the north side, there are not, and we all know the issues of the north side are not anything like years ago that the south side had. We are higher. But in minutes that I've had researched, there's a lot of talk of hot spots. Judy Tuttle and Mr. Samples are two, Sammy Truett, they knew there were some hot spots. Fact is, there was a, and I think it was a budget committee the more I think about it, back in probably 05 – 06 where when Steve Strickland's group was kind of finalized by that, you know, we no longer need Strickland. We're in the stormwater is kind of complete; the south side is in good shape. At that point, I asked Judy Tuttle, you know, please don't let Earthworks go away. We do have some problems on the north side. We don't have a lot, but we do have problems, and to talk to the engineer there on my street particular [sic] from Ocean Boulevard to Cedar, which is a little over a quarter of a mile, we have one 12-inch pipe for the water to flow; one 12-inch pipe. That, you know, is an issue. Now this last big rain we had, I guess back in September, October, time flies and I forget that. There is one ditch across from my property that's the length of my lot where the water actually was over top of it at the bottom rung of the fence across the street. I had probably 4- to 5-inches of water in my whole front yard, and probably within 5-minutes had the rain continued, I would have had it in my house. It just couldn't get out of that little 12-inch pipe. So, and I appreciate everything that Mr. Adair, he's certainly doing everything can, as fast as he can. I appreciate the stormwater committee's efforts in this and I hope that someday we can eliminate just a few hot spots, and it's not major, but there are some hot spots. So, I thank you very much for everything you're doing. Thank you."

"Ron Ott, 7th Avenue North. I would like to thank Mr. Adair and the public works department for doing a fine job on Lake Elizabeth. The main problem you have there is the algae growth that once that starts it really, it does start, starts to smell, and the people that have irrigation systems coming out of there, so it's not only in your back yard, it starts throwing it all around the front yard, too. So, it's a necessary evil that we need to have these people go in there and kill this thing, even probably some of the good stuff. When I first moved there ten years ago, I used to mow all the way down to the edge of the lake, because it looked good. It looked good, and then I, it's not that I didn't get lazy with it, I wanted, I just, I let it grow, and then the ducks never came up. And that was a big point, not have to pick up all this refuge all over the lawn. That keeps them out. As for what I put in there, everything I put, I put in died. But this year for some reason, I got these big elephant ears. I don't know where they came from and I like them. They're good. And I put in some sunflowers, and I put in some coreopsis, moonbeams, and I put some daisies in there...let's see if they stay. But, that's what I'm doing, just to keep that, you know, six-feet from my back yard to lake and try to hold the earth in place and to keep the ducks out of my yard. They don't, they don't walk out of there when that's there. Maybe some people don't like it, you could tell them that too. I see my neighbors, a lot of them, continue to mow down there. They like it. Maybe we could come up with some plants, nicer plants, I don't know what they are, I just grab things and throw them in there. I have no idea green thumbs at all. That's about it, and the, oh yes, you're going to walk that watershed. I know when I first had the problems, and I had problems of trash coming in, so it didn't get interesting until I got on the other side and start going up behind those apartments up there, because that's where your water comes from. There is this [sic] small drainage ditches that are full of trash, and what not. And as you go along up there, you'll see a whole lot of interesting things. If that's what you're thinking about, you're going to go outside the town of Surfside, you'll see the real water problem up there. And they didn't stop it when they put in that new basin in there with the heavier screens. Tom Garity put them in there. I used to go to the stormwater meetings in Horry County and cry, because it's tough, it's every day you look out at the lake and you see 15, 20 big bottles going by every day. You add 15, 20 bottles times 365, you got a lot of bottles in that lake. But, you're doing a good job. The rest of them, all the lakes are great; better than they ever did last ten years that I've been here. Thank you very much for your work."

Mr. Adair said Myrtle Lake was replanted today. A chicken wire fence was put on the water side to keep the geese out.

6. COMMITTEE COMMENTS.

Survivors error
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10/18/2011

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Mr. Sine asked if the homeowners were allowed to mow to the water's edge or whether they would be required to maintain the natural buffer. The committee encouraged homeowners to leave natural buffers as a filter and keep the bank stable. Ms. Donevant said the town has a stormwater easement that conveys with the land; the town has no authority to require a homeowner maintain his property in a particular manner. Mr. Adair said the stormwater approval is the only means to require specific maintenance. Ms. Donevant agreed. Ms. Ross asked how "maintaining the easement" is defined. Ms. Donevant said the property cannot be clear-cut nor can the swales be filled in, and the grassed areas, clean-outs, and catch basins must be maintained. Swales are now recorded and the town has easements to prohibit owners from filling in swales. Mr. Mabry asked if the homeowner is responsible for maintaining the easement area. Ms. Donevant said yes; the town can enforce maintenance, because it is in the stormwater easement. Mr. Mabry asked how the check dams are maintained. Ms. Donevant said by the property owner. Mr. Mabry asked if the town required owners to maintain stormwater systems installed 10- to 20-years ago. Ms. Donevant did not know. Public Works currently checks drainage pipes. Code Enforcement checks when dirt is being hauled in, or changes are proposed for a lot. If more than 6-inches of fill dirt is delivered, the homeowner has to apply for a stormwater plan. Mr. Mabry asked whether the town monitors changes made to stormwater improvements by residents. Ms. Donevant said usually a neighbor or other concerned citizen will call town hall to complain; there is no procedure.

Mr. Adair said the Master Stormwater Plan has provisions for staff to inspect what is done. The town is responsible for maintaining its drainage system. Swales and ditches installed up to 30-years ago have been filled in by homeowners. Staff is performing a drainage study on the north end of the Magnolia and Myrtle Basins to determine what exists and identify problems. Mr. Adair said these comments were relevant to the discussion of the north Surfside drainage plans. In September or October last year there was a 16-inch rain in two days, which was probably a 50- or 75-year storm event. He went to at least 50 houses on the north end, and a few houses on the south end, where there was as much as two-feet of water in the yards. It was clear to him that there is work to be done on the north side, particularly in the area from Pine to 5th and from Poplar to Cedar in the Myrtle Basin, and from 14th to 17th in the Magnolia Basin. After the drainage study, the Magnolia Basin map will be completed, allowing staff to target improvements. The impact could result in changing the size of a drain pipe or repairing a weir that might improve water flow for as many as 100 to 150 homeowners. Mr. Harbin asked if this committee could assist with this project. Mr. Adair said the surveying work is over half completed; Magnolia mapping is complete.

Mr. Sanford explained that he performs an initial review and hand sketches the drainage and rights-of-way areas. Then surveying crews survey the area. Once surveying is complete, another person checks the surveying crews work. Magnolia Basin modeling is about 50-percent complete, which appears to be a pretty good system. There are some problems that can be easily fixed, others won't be. There are great soils in this area. There are bad soils in Cherry, Rogers, and Magnolia lakes, which is why those lakes were dug. Some areas have no drainage at all. Fortunately, 90-percent of the storms are ½-inch or less, so there isn't a problem. Large storms create the problems. The town could spend millions of dollars to enable draining to finish in "five seconds," or it could spend less and determine what is necessary to maintain water quality and what the residents can tolerate, i.e. 6-inches of water in the yard for half-a-day. The Myrtle Basin survey will be finished this week and modeling will begin after the drains and pipe sizes are checked. Mr. Harbin asked if this would be a multi-year project. Mr. Adair estimated completion within a year or so. The size, scope, and cost have to be considered in relation to the stormwater budget. Problem areas will be prioritized. He was committed to completing the system inventory to establish a record of what exists throughout the town. The town is required by the NPDES II program to have a maintenance program. In the past, a record was not kept of which ditches were cleaned. That is required to comply with Phase II, as well as documenting other maintenance tasks.

Mr. Harth said the town should be cognizant of development plans to insure buffers are maintained, defoliation doesn't occur, and that water quality testing has been done. Mr. Sine hoped that owners would be prohibited from mowing to the water line. Mr. Harth said it sounded like a buffer is required, but it also sounds like the owner can clear-cut if he chooses to do so. The minute the land is

113 clear-cut to the edge of the water, the land will erode. Mr. Sine said the same thing would happen that
114 occurred in Dogwood Lake, depending on the current. Mr. Adair said if owners were defoliating to the
115 water, he supported having a hold harmless agreement to protect the town from being required to build
116 bulkheads or other projects to stop erosion. Ms. Ross said it was a cascading effect. She believed the
117 word "maintain" should be defined. Mr. Adair said that is why the soil by the lakes is sloughing off into the
118 lake. Ms. Ross said it could be a result of a neighbor's action from three houses down, because of
119 underlying currents and other factors. She believed the committee should make suggestions for proper
120 maintenance, offer workshops or help. Sod would not filter everything, nor would one- to seven-trees a
121 lot. Mr. Harbin believed there are two goals: One, to educate the homeowner who owns the land and is
122 best served by trying to maintain the bank with the proper vegetation, and two, does the stormwater
123 committee want to suggest to the planning staff that more ordinances are needed as they affect
124 waterfront lots. Ms. Ross said for water quality purposes. Mr. Harbin said maintenance, hold harmless,
125 and recommendations could be included. Mr. Sine asked if that should be done at the next workshop.
126 Mr. Harbin said it could be added to agenda and that the planning staff and building department could be
127 invited to attend. Mr. Harth said the time frame is critical. Ms. Donevant said two house plans were in the
128 building department for review. Mr. Sanford suggested a survey be attached to the deed documents to
129 show exactly what is to be maintained. The hold harmless agreement could be included with the
130 stormwater packet. The first lot is at the engineer's for stormwater approval, and a hold harmless
131 statement could be required before the building department approves the plans and public works
132 approves the driveway. Mr. Sine asked if a motion with a recommendation to council was needed. Ms.
133 Donevant didn't believe that was necessary; Town Council adopted the stormwater ordinance and
134 anything that is done within the department to uphold that ordinance would be proper. Mr. Adair said this
135 was a matter of policy. Mr. Harbin asked if the plans would be presented to the planning staff. Ms.
136 Donevant said it would be approved by staff; language is already in place except for the hold harmless
137 agreement, and that could be attached to the department's plan review.
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139 Ms. Ross said the hold harmless is only a portion of the committee's concern, which is mainly
140 water quality. Mr. Adair said erosion is a concern, if the vegetation is cut. Ms. Ross said there are two
141 issues with the same solution. Mr. Adair said compliance would need to be required. Mr. Harbin asked in
142 regards to the plans under review what action the committee could take to put "teeth" to accomplish the
143 actions discussed today. Ms. Donevant said the homeowner owns the property to the lake; she said that
144 whatever stormwater plan is submitted will be approved because the pre-development has to meet the
145 post-development calculations. These lots already have stormwater in place. Staff can add the hold
146 harmless agreement and have it and the plat recorded to document the stormwater system on the
147 property. Mr. Sanford said the roof drainage goes into a percolation system so there is no washing from
148 down spouts. He suggested marking the stormwater plan with a "natural area that is undisturbed" up to
149 the silt fence; making that part of the stormwater permit and recorded documents that would provide
150 evidence, if changes were made. Mr. Harbin said that was the committee's position, and it would lobby
151 for that to be included in the approval process. Mr. Sine asked what the penalty would be if violated or if
152 erosion occurred any way, could the town require an owner to repair the bank. Ms. Donevant said the
153 town could require repair, if the stormwater ordinance was violated. Penalties that double the permit fee
154 and remediation would be imposed. Mr. Harbin believed this discussion was after-the-fact, and
155 suggested that the committee give Ms. Donevant general direction for the stormwater cleanup. Mr. Sine
156 moved to ask the planning staff and public works to add a hold harmless agreement and require a buffer
157 to be considered a natural wetland to the stormwater guidelines for lake front lots and that some type
158 penalty to be imposed if the buffer is removed. Mr. Hart seconded. Mr. Mabry believed this would be
159 difficult to enforce; it is difficult to explain to homeowners that there are restrictions on what they can or
160 cannot do on their property. Ms. Ross said she attended two recent isolated wetlands workshops; she
161 could get "exactly what we need in writing." She will contact those sources to determine how they work
162 with homeowners. Ms. Donevant said there is no homeowners association at this property; there are 46
163 separate lots. If the homeowner is made aware that there is a percolation system or some other
164 stormwater management system in place that they must maintain, she believed they would maintain the
165 system to preserve the lake and comply with recorded plans. In the past contractors turned in the
166 stormwater plans, but they were not recorded. All voted in favor. **MOTION CARRIED.**
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168 B. North Surfside Drainage Plans – John Adair. Mr. Adair added to information already stated
169 that DDC Engineering was involved in the inspection of the north end basins. Owners do not seem to
170 understand the impact to drainage when they fill in pipes and swales. Staff has not monitored the
171 stormwater system in the past, which resulted in the current assessment being performed. He believes
172 the problems can be resolved, but staff must know what exists, and there must be a methodical process
173 for improvements.
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175 Mr. Sine asked what the progress is on street sweeping. Mr. Adair said the bid package is being
176 prepared; if things progress as expected, street sweeping should begin in October.
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178 C. Mission Statement Adoption – Leigh Wood. Mr. Sine noted that Ms. Wood was to draft
179 language for the committee's consideration. Mr. Harbin said since Ms. Wood was absent, this topic was
180 tabled until the next meeting.
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182 D. Dogwood Watershed Walk – Adopt A Date. Mr. Harbin said the anticipated date for this was
183 September or early October. The recommendation is to trace the watershed as far inland as feasible,
184 and possibly go all the way through. He believed this was similar to the work staff was doing gathering
185 information about the existing town systems. Ms. Wood is aiming this at planning committees,
186 stormwater committees and staff. Mr. Adair said it would be beneficial for educational purposes. There is
187 already a swash study on Dogwood where monitoring stations will be installed throughout the watershed
188 to determine where hypoxic conditions are created. Mr. Harbin said this walk would be on foot so
189 participants could get a first-hand understanding of how the system worked.
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191 E. Actions to be Taken as Result of May & June Workshops. Mr. Harbin said one action was the
192 shoreline stabilization emphasis as was discussed for the Harbor Lights property. Mr. Adair already
193 explained the piping and swale mapping data. The public education campaign includes drain marking,
194 doggie bags, more interpretive signage, and adopting a watershed. Mr. Adair said the watershed walk
195 could be much more interesting if it were called an "illicit discharge search." He believed that should be
196 an integral part of the walk, because illicit discharge is a big part of the water quality problem. This is part
197 of NDPEs and there are ordinances against illicit discharge. Mr. Harbin said that was a good suggestion.
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199 F. Fountains – Resizing, Lighting, & Unstopping. Mr. Harbin had heard comments that the
200 fountains clog up. Suggestions were made to use larger fountains, smaller fountains in smaller lakes,
201 and as funds become available, increase fountain sizes and lighting so they are more aesthetically
202 pleasing. Homeowners unplug their personal fountains when they clog and wait for sediment to drain or
203 they clean them. He asked if this process would benefit the town's fountains. Two owners at the
204 Hermitage have offered to intermittently turn on the fountain, if it would help. Mr. Adair said every lake is
205 unique. Fountains may not work properly because of low water due to lack of rain, debris, backwash from
206 the ocean or other reasons. Ms. Ross asked if the fountains operate 24-hours a day. Mr. Adair said yes,
207 the public has made it very clear over the years that the fountains should operate 24-hours a day. Mr.
208 Harbin asked if the committee should make a recommendation to change that. Mr. Adair said it wasn't a
209 problem to operate them 24-hours a day. Staff inspects the parks, ball fields, opens public bathrooms,
210 checks the lakes and fountains every day. When they are notified a fountain is not working, staff is sent
211 that day or the next to determine the problem and fix it. The fountain was turned off at Cherry Lake for a
212 few days last week, because the water was too low. Larger fountains are not always a good answer,
213 because going from a 1-horsepower fountain to a 2-horsepower fountain that throws tens of thousands of
214 gallons of water per hour also draws in a proportionate amount of debris and leaves. Sometimes a
215 smaller unit is more effective. The 2-horsepower fountain in Dogwood Lake was moved three times
216 before the ideal location was found; staff also installed mesh screen around it to help prevent trash from
217 being drawn into it.
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219 G. Coastal Training Coordinator Direction. Mr. Harbin said Ms. Wood had asked for direction
220 about what the committee wants her to do. Ms. Wood obviously wants to be involved in developing the
221 mission statement, the watershed formation, and the watershed walk. Ms. Ross said to provide public
222 education, develop plans, and brochures. Mr. Harbin asked Mr. Adair if he wanted Ms. Wood to provide
223 staff education. Mr. Adair said no, she should focus on public education and involvement in MCM I and II.

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Ms. Ross asked if the algae growing on the lake was on top or if it was duckweed. Mr. Ott said all over and it was not duckweed. Ms. Ross asked if the lake should be stocked with tilapia. Mr. Adair said stocking the lake with fish had been discussed at length and it was not a viable option. Ms. Ross asked if the committee could recommend impervious [sic] pavers for driveways; she believed it would be worthwhile to pursue. Mr. Sine said pervious pavers were generally used if you went over your 50-percent allowance. Pervious concrete doesn't count any more. Mr. Adair did not believe using pervious pavers could be mandated. Mr. Sine said that was why driveways are designed with cement and a stone section in the center.

Mr. Sine said the town matches funds for ditch tiling, and the committee has discussed matching funds for lake fronts for plants, grasses, and composts socks. With new neighbors coming into town, he thought the committee should explore this to encourage homeowners to keep the lake fronts natural. Mr. Harbin said that was recommended to council two consecutive years, if the committee meets with planning, perhaps it could be a joint recommendation. Mr. Harth suggested using the lake at 14th for an example. He believed this plan would "have a real payback."

Mr. Harbin said some committee recommendations were well received by council. He suggested that a vote be taken to make specific recommendations to council in coordination with planning. Mr. Harth said planning should be invited to the next workshop, and be prepared to discuss specific recommendations, costs, and benefits. Mr. Harbin said there are workshops in August and September. Mr. Harth was concerned about keeping "in front of" Harbor Lights, which probably has the largest number of lake-front lots in town. Mr. Harbin said there are resources that can be delivered to owners before they begin construction, there just aren't any enforcement tools. Ms. Ross suggested that a draft document be sent between the members for consideration prior to the next workshop. Mr. Harbin said it could be delivered to Ms. Donevant and Mr. Adair for inclusion in the stormwater package.

Mr. Harbin said the next workshop is August 16th at 5:00 p.m. Ms. Wood will be asked to draft a mission statement for discussion. He said her involvement with the committee during the coming year and training plans should also be discussed. Ms. Ross said the September workshop should include workshops for the public. Mr. Sine said lake-front property owners should be targeted. Mr. Harbin said the workshops are informal and discussion can be added or removed as the committee deemed appropriate.

7. ADJOURNMENT. Ms. Ross moved to adjourn the meeting at 6:07 p.m. Mr. Sine seconded. All voted in favor. **MOTION CARRIED.**

Respectfully submitted,

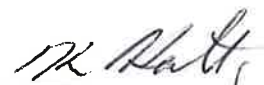


Debra E. Herrmann, CMC, Town Clerk

Approved October 18, 2011



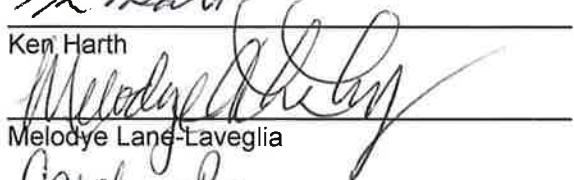
Kenneth Harbin, Chairman



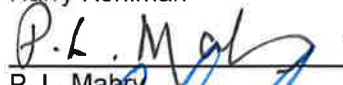
Ken Harth



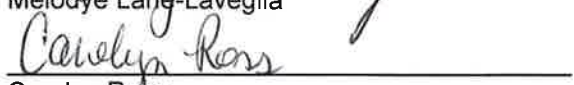
Harry Kohlman



Melodye Lang-Laveglia



P. L. Mabry



Carolyn Ross



Dan Sine, Vice Chairman