**SAPCC Environment Committee Meeting**
**September 26, 2018 at: Co-Lab, 2188 West University Ave., St. Paul, MN 55114**

Members present: Michael Russelle (co-chair and convenor), Stephen Mastey (co-chair), Karlyn Eckman, Betty Wheeler, and Tim Wulling.

Guest: Lisa Habeck

**Item 1: Minnesota Chemical Building Legacy Pollution**

It has been known for a while that there was a petroleum leak years ago at this site, at 2285 Hampden Avenue West. Information about it can be found on “*What’s In My Neighborhood?*” on the Minnesota Pollution Control Agency (MPCA) website.

However, it has been found more recently that there were other chemicals released at the site, primarily cleaning solvents such as trichloroethylene (TCE) and similar ones. TCE is a highly volatile chemical that is immiscible in water. It is lighter than water, and produces vapors that rise through the soil. It is non-polar, so it does not tend to adhere to earth materials. It moves easily on top of water, so may flow with the movement of groundwater. Its vapors easily seep into basements wherever it moves.

The MPCA reports that it is currently known that there is a small, 10-20 foot site of chemical pollution release. If that is the extent of the problem, it is possible that the problem is small and could be excavated and treated. However, the problem would be more complicated if it were found that there were also other places where leaks occurred; for instance, leaks from barrels, or that contaminants were released through the basement at cracks, or were released through the sump system.

The MPCA has taken some soil and water samples, but they are also waiting until they can get more information. There may be additional sites close by that could be additional sources of pollution releases.

The Environment Committee sees this issue as important, because there is quite a bit of housing nearby the site, including the Hampden Square Apartments and Townhomes and possibly others, depending on how far offsite the pollution may have travelled. Until the extent of the contamination can be delineated, there is no way to know exactly how many homes may be vulnerable to this contamination.

There are two entities that have agreed to cooperate in the cleanup; these are the long time owners of Minnesota Chemical Company, and Exeter, which is the company that is buying the property. It is an approximately 1-1/2 acre site. A $1 million grant has been obtained to help in cleaning up the site.

One problem is that most groundwater maps that are currently available are not detailed enough to accurately define the groundwater flow. Since the last meeting, Wheeler obtained 5 maps from the Minnesota Geological Survey (MGS), and emailed them to the Committee members, but they are mostly small-scale (large area) maps that do not show very much detail. For example, the 1916 map has topographic contours at 20-foot spacing.

Russelle stated that there was some groundwater information acquired from the vicinity of the St. Paul Campus of the University of Minnesota. It was a project done by a group of students some years ago, and a report (of about 40 pages) was compiled from that work. The information indicates that the campus is primarily underlain by a large drumlin. The topography of the campus map shows topographic contours at 0.2-foot spacing; thus, the detail is substantially more refined. The groundwater flow from the campus area is toward the south, except near the Sarita wetland (where it flows south-southeast). Also, early in the state’s history, a significant amount of fill was brought in along the railroad lines, just to the south of campus, which apparently modified the natural groundwater flow.

The city of St. Paul is compelled to divert stormwater away from storm sewers, and therefore help reduce rapid flow to the Mississippi River from the very large storm events which are more frequently occurring in the last few years. Such diversions will decrease river flooding, as well as help reduce the amount and numbers of times when the metropolitan water treatment system is overloaded. St. Paul is interested in installing infiltration basins in many areas of the city. This includes large infiltration basins, such as the one in Hampden Park, as well as smaller rain gardens.

Eckman said she spoke with Alan Knaeble from MGS. He told her that the only monitor wells he knows of within the area of South SAP are in Hampden Park, and that they are completed at depths below the infiltration basin. He said that the monitor wells in the park have not yet been sampled for water quality, or specifically, for chemical pollutants.

The Hampden Park is about 9 acres in size. By comparison, the amount of water which is captured and released in boulevard rain gardens is most likely so small that any mounding of the groundwater below probably could not be measured. However, this basin in the park is large enough that some mounding of groundwater could occur, if the sediments below the basin are not too sandy and contain at least some finer sediments. If mounding occurs below the park from very large rainfall events, this may temporarily change the local groundwater flow in the immediate vicinity of the park. If so, possible additional effects could be some temporary changes to where the pollution has been moving in the past years or decades, possibly making the delineation more complicated, and/or moving the pollution into new areas.

In the first 9-10 months after installation of the basin, visual monitoring showed that the basin took all the water from the precipitation events. However, this year had several very large rains, so the basin appeared to have some standing water on occasion, although none of these were for long duration.

Eckman reminded us that a report was written some years ago by Anthony Randazzo (“*Historic Waters of the Mississippi Watershed Management Organization*”, which is found at the MWMO website: mwmo.org). That report includes information that extends east of Raymond Avenue (which is in the direction of the Minnesota Chemical Building). There may be some information in that report which will shed some light on this problem.

Eckman also remembers that a university student of, perhaps, either Design or Landscape Architecture, made a presentation of the research of his capstone project to the community, at least 12-14 years ago, but maybe as much as 15-20 years ago. He proposed that the area could be developed with designing canals, similar to those of Venice, Italy. His research predated the work of Anthony Randazzo. Mastey stated he will ask the former head of the UM Landscape Architecture Department if he remembers the student’s project.

The question was asked, when will the cleanup start? No one is sure, although it was speculated that Exeter will probably want to get started soon.

**Item 2: Traffic on Raymond Avenue**

Eckman had reported previously to the Committee that trucks are passing her home about every 1-2 minutes, for 24 hours per day, which is disturbing her sleep. She detailed what kinds of trucks she regularly sees: dump trucks (with road rubble and construction material) pass her house all day; the Kane tanker trucks run in the evenings; and the hopper trucks with frac sand pass during the night.

Eckman also reports that there is a very fine dust everywhere near her home. She noted that, if you look closely, you see dust has wedged in all the cracks in the road, and she mentioned it is impossible to keep her home free of dust, because it builds right back up each time she cleans. She rode her bike around the area, and she could see a trail of sand that leads to the entrance of the rail yards. This is most likely from the frac sand that is mined and transported to use for fracking oil and gas wells. She notes that in unloading the hopper trucks, the sand blows through shoots, and therefore creates airborne particles.

Two of the SAP Transportation Committee members, Pat Thompson and John Mark Lucas, have both recently been out of town; thus, there has been no progress on the issue.

**Item 3: Boulevard Soil and Turf Quality after the City’s Road Construction**

Some of the issues reported before that arose on the boulevard along the Raymond Avenue areas of reconstruction are also being noted along areas of the Como Avenue reconstruction. It has been observed that the new fill and topsoil is excessively compacted, and that the final grade is convex rather than the concave shape that would be properly designed to absorb on-site infiltration. We will need to watch if the new turf also is soon (within one or a few years) becomes very weedy and otherwise shows poor quality. These traits are not always obvious in the first year or two.

It was noticed at least once that construction equipment was driven over the emplaced subsoil, in order to top it with the black topsoil. This procedure produces excessive compaction. In front of the Colossal Café, Russelle noted that the back dual tires dropped between 6”-7” deep, creating an extreme compaction problem.

Mastey reported that he talked to the St. Paul Forestry Department about these problems. His impression is that the inspector in that department does not understand the problem, perhaps arising from an inadequate background to properly inspect these projects.

Russelle discussed his observations of similar issues along University Avenue, in the vicinity of Project for Pride in Living. He saw that there was a person mowing the lawn on the boulevard, and the mower caught up crushed rock from the boulevard fill, which resulted in spewing that rock out from the mower. This is an indicator of how shallow the topsoils are, because the crushed rock has frost-heaved to the surface from the subsoil fill below.

Wheeler updated the committee with the report that now along the Raymond Avenue stretch (just north of the double bridges) there are two properties which have completely covered over the boulevard with black plastic. These properties are apparently having similar issues with maintaining the turf that was only installed by the city about 3 years ago. She volunteered to obtain pictures of these two boulevards now, and to try to contact the owners of those properties, to talk to them about their experience.

Mastey reported that the city of Ramsey has great soil specifications for their city. He believes their requirements are well thought out. His experience is that the public Works and Parks Departments there successfully enforce their regulations. One of the important values that will flow from such an approach is to reduce the need for boulevard irrigation, and therefore minimize the installation of sprinkling systems. It seems to be working well for that city.

In contrast, the city of St. Paul’s soil specifications are weak. It also seems that the city’s field inspector on these reconstruction projects may not understand them. Mastey mentioned that he confronted the field inspector four years ago about similar issues. The inspector assured him that the problems would be addressed; however, the problems never were corrected.

Additional problems that arise from poor quality materials and installation include effects from winter weather. When the soil is excessively compacted, ice can get sometimes multiple inches thick. Then snow berms pile up to as much as several feet high. These result in public safety issues for pedestrians, such as trying to scramble up over the snow berms, or walking in the street, consequently causing additional safety issues. Soil compaction also creates stormwater contamination by sediment, where the turf does not grow and the soil is no longer held back with a tight root system.

The committee agreed, however, that the city’s reconstruction projects should be held to good specification standards for the quality of materials and the proper installation for these projects. Otherwise, the city is not properly managing the public money being spent on poor quality results, and the property owners are forced to work with poor materials and installation, weeds, rocks emerging from beneath the turf, etc.

The previous chief of the city department, who has now retired, seemed to have a better understanding of these issues. The committee consensus is that we need to enlist someone who works in the city, as well as other knowledgeable persons, who might be willing to provide leadership to the city about establishing requirements for better soil specifications. One person who would probably be interested in these issues is Zach Jorgensen (head of the Forestry Department). We should also try to enlist the help of the Capitol Region Watershed District. We agreed that we should attempt to enlist this help before we approach the Engineer for these projects in the Streets Department.

The consensus of the committee is that these street reconstruction projects need to have a trained Landscape Architect, or someone similarly trained in soil science and botany. It was agreed that we should recommend in the SAP 10 Year Plan that the city hire a Landscape Architect for these inspections and provide that person enforcement authority. The committee agreed that we should also recommend that the boulevards along Raymond Avenue and Como Avenue recently reconstructed should be remediated. After all, the city assesses property owners, based on the length of their property along the reconstructed street. They are paying a significant assessment, but right now they are not receiving a quality result.

**Item 4: What Grant(s), If Any, Does the Committee Wish to Pursue for the Upcoming Year?**

The Executive Director, Kathryn Murray, believes we should pursue a Capital Improvement grant from the Capitol Region Watershed District (CRWD). She has volunteered to help write the grant.

The maximum amount for the current round of grants is $20,000. It would be used to assemble a feasibility study for a larger project that would cost at least $40,000. The deadline for the application and the request for proposals (RFPs) is October 31, 2018, so we would only have 1 month to pull the application together. Also, we need to keep in mind the size of the grant as a limit on its scope.

Almost all of SAP is within the CRWD, including the Sarita wetlands. The area immediately around the Kasota Ponds is within the Mississippi Watershed Management Organization (WMWO). Interestingly, in areas which are very close to the boundaries of the CRWD and the WMWO, the surface water is designated to be within the WMWO, but the water from the storm sewers is in the CRWD.

Mastey reported that the CRWD and the Ramsey Conservation District (RCD) provide grants of up to $100,000 for homeowners associations (HOAs), churches, small commercial properties, etc. to install infiltration basins. Also, the RCD has landscape architects who will do the project designs for free, if the property owner will install a basin.

As a project to write a grant application, some of the ideas suggested include the following.

A - Storm Drain Stenciling. A project to stencil storm drains, to remind residents not to allow pollutants to get into the gutters. This type of project has been successfully accomplished in neighborhoods of Minneapolis.

B - Outreach, Education and Expanded Facilities for Dog Excrement Collection. A project to remind and encourage dog owners to collect dog excrement and properly dispose of it into waste containers. This project would require that we reach dog owners where there is perceived to be a problem of compliance, such as the newer condos, apartments, lofts, etc. along the Green Line. We would need to define the methods of education and outreach to these residents, and to figure out what would be the entry point to these developments, in order to contact the residents.

Committee members noted seeing trash cans overflowing with dog poop bags. We would need to determine how to provide stations with extra bags and signage within parks and along boulevards. The project would need to define how to perpetuate and sustain the supply of bags at the station(s), and to include additional trash receptacles if they are regularly overflowing.

C - Stormwater Improvement in the South SAP Park on Cromwell. A project for producing the design of a stormwater improvement project in the South SAP park where Joy of the People (JOTP) is currently housed. The park is several acres in area, and much of it is underutilized. A couple ideas were:

 a - To pre-treat the underground stormwater on the east side of the park, with a pre-treatment basin or a manhole and beehive design.

 b - To design a more ambitious project that is also innovative. Perhaps it would include daylighting the stormwater as well as pre-treating it, with a component that would also trap phosphorus. The daylighting could be designed as a pathway along a meandering stream. This idea would probably need to have the project work divided into segments, because the total costs would likely exceed the $100K maximum amount.

D - Groundwater Flow in South SAP. A project to begin to define the groundwater flow in the South SAP area. The question arose that we are not sure if the CRWD supports groundwater projects, so we would need to find this out. Another question is whether we could get some monitor wells drilled with this grant. Alternatively, perhaps we could just measure the groundwater levels in the monitor wells in the Hampden Park, possibly working with University of Minnesota (UM) students. In the latter case, we could not have students collecting samples anywhere close to the sites of known contamination, so that students are not exposed to any chemicals.

Russelle volunteered to check with the MWMO, to determine if any project we are discussing could be funded by one of their grants. It was also suggested that we look at the CRWD newsletter, to read about examples of projects they have funded in the past, and how they have marketed small commercial projects.

The committee consensus is that we should compare ideas by email, and see how far we get before our next meeting.

Mastey volunteered to contact Nathan Zwonitzer (at the CRWD) to ask for advice on what exactly we would need to put together. He also stated he thinks that Zwonitzer would tell us if he thinks any of our ideas would have a good chance for getting a grant.

**Item 5: Issues Concerning the Rain Garden at Bayless and Raymond Avenues**

The committee discussed the issues concerning the big rain garden at the intersection of Bayless and Raymond Avenue. The project was not originally built to the design specifications. The basin was excavated too deep, so an excessively amount of mulch was added to compensate. The pipes were also installed too low, and the water now flows into a layer between two layers of mulch. This traps the water, so there is standing water after heavy rainfalls, and the pipes are getting full of sediment. Many of the plants have drowned, so there is a dead area.

The city Street Design Engineer, Barb Mundahl, has contacted the SAPCC, stating that the burden of maintenance of the basin is our problem. Mastey has volunteered to provide cup plants (which are a type of wetland plant), which would grow in these conditions, until the problems are remediated by the city. Cup plants attract goldfinches and butterflies, so they would be an attractive addition. They are a tall plant and can grow to about 6 feet; however, the basin is between 4-5 feet deep, so the plants would not get overly tall or obstruct vision for traffic. He sent an email more than a week ago to Forrest Kelley and Nate Zwonitzer (CRWD personnel), stating he will donate the plants. However, he has not heard back from them with permission to install them.

**Item 6: Kasota Ponds Issues**

Russelle had previously sent a message to Udai Singh (at the MWMO) about the water balance calculations that they had agreed to do, but he has not heard back yet. He said he will write Udai again, or else contact Stephanie Johnson, to see where they are now in that work.

Mastey stated he will ask Jake Janski (at Minnesota Native Landscapes) about cleaning out buckthorn from around the Kasota Ponds, which we discussed at previous meetings. Eckman volunteered to assist other committee members to write the grant to the MWMO to obtain the money to hire the work to be done. Other members should contact Eckman, to begin writing that grant.

**Item 7: Announcements**

Mastey reminded the committee that the grand opening and ribbon cutting for the JOTP infiltration basin project will be on October 6, 2018 from 2 to 8 pm. There will be music, food and beverages provided with each person’s ticket. It is also a fundraiser for JOTP, so tickets are $25 early, and $35 at the door. The SAPCC received 5 free tickets.

Mastey also mentioned that the building and infrastructure onsite in that park still needs some work and TLC. We will need to find additional public and/or private grants to make all the improvements which are necessary.

Russelle noted that the website for the Co-Lab is “Co-Creates.” The facility includes 650 sq. feet in the basement, which is an open area that could be used for a variety of purposes, such as for theater space, or whatever. He also pointed out the amenities of the room and adjacent rooms where tonight’s meeting was held.

Eckman made a motion to adjourn the meeting; Mastey seconded it.

Respectfully submitted by Betty Wheeler, October 10, 2018.