

**Friends of Green Lake  
Meeting Summary  
Tuesday, Nov. 22, 2011, 7:00-9:00 pm  
The Hearthstone (6720 E Green Lake Way N)**

**Next meeting: Tuesday, January 24, 2012 (FOGL meets on the fourth Tuesday)**

**Recorder:** Davis Patterson

→ Action items denoted like this in each section.

**Attendees:**

Gayle Garman  
Richard Fleming  
Ami Nasution  
Karen Schurr  
Brian L. DeLuca  
Klaus Shelley  
Davis Patterson  
Rebecca Timson  
Karen Ko, Dept. of Neighborhoods  
Sandy Shettler

**Introductions**

Attendees introduced themselves.

Rebecca shared STEM programs in Billings Middle School where children are monitoring water quality.

**Treasurer's report: Karen Schurr, FOGL Treasurer**

A report was distributed showing no expenditures for October and November.

Donations of \$287.50 total were received (\$237.50 from MyGreenLake.com blog). MyGreenLake.com blog donates 10% of profits to designated non-profits.

Combined balance: \$5854.98

Rebecca said she would check on getting on Brown Paper Tickets list to receive donations.

**Report from Dept. of Parks and Recreation**

Kevin Stoops, from the Dept. of Parks and Recreation, was not present.

Karen Ko, from the Dept. of Neighborhoods spoke about her responsibilities, which cover 3 neighborhoods north of the Ship Canal.

She asked if FOGL was tracking Shoreline Master Plan. Anyone altering a shoreline must get a permit. The regulations are being updated and the plan applies to Green Lake. Public comments are being accepted until Dec.9. There are two versions: revised proposal and red-line version showing changes.

→ FOGL. will send out the Shoreline Master Plan Update website address to the email list. .

**Monitoring: Summary of summer temperature and clarity data: Richard Fleming, PhD**

Billings Middle School has done level 1 monitoring under the Lake Stewardship Program, weekly. Jean Florance of FOGL is also getting weekly temperature and clarity from paddleboat dock.

Richard and Gayle have been doing Level 2 monitoring: kayaking out to the site and sampling surface temperature and water clarity using the Secchi disk. Recently Ben Hall and Scott McCready have done the Level 2 sampling. The water sample is taken one meter below surface and water is collected for laboratory analysis of nutrients and chlorophyll. King County picks up the sample and does analysis.

Richard shared graphs with 2011 and past year's results:

- Cumulative rainfall. There was a storm end of Feb/Mar, lots of spring rain, dry summer, fall rains in mid-Sept. This week was the first storm of the season, with an inch of rain last night, another today. The drainage pipe from Bitter Lake is usually diverted around Green Lake, but when there is an inch of rain, the system can't handle it, so the lake should be getting substantial inflow right now. Water exits at the Densmore drain (by wading pool). This event only happens once or twice a year.
- Temperature of lake (biweekly, from kayak): 2005-11. In most respects, this year was fairly average. The lake stayed warm longer than usual into Sept.
- Clarity: Measured as the depth at which the target disappears (Secchi disk). The alum treatment in 2004 to improve water clarity is remarkably successful—visibility had been 2 or 3 feet. This treatment was for public safety and to improve clarity. In the summer, it's been about 10 feet. Late summer 2008 was extraordinarily clear (could see the to the bottom everywhere)—we don't know why.

The sample spot is over the deepest point of the lake (where it was dredged)..

We do profiles twice a year: early July and late Sept.; we take surface, midway and a meter off the bottom. The lake generally does not stratify. The wind circulates the water. Deep lakes in King Co. can be very stratified, but most of Green Lake is less than 15 ft deep.. One of the attributes of Green Lake is that it stays well mixed.

Brian: Is there any kind of cause and effect between temperature, rainfall, Secchi measurements, or correlation?

Richard: If there's not a lot of rain in summer, and then enough rain falls to get flow off of grass, there is a spike in bacteria, most likely because of geese.

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Rebecca: Does storm flow into lake come with sediment?

Richard: Some sediment is displaced when Densmore drain overflows. Gayle: Sediment samples from near the Densmore drain and prior to alum treatment were high for metals. Only once has sewage flowed into the lake, in Dec 2010 because of pump station failure.

Richard: There is a lot of street runoff and dirt/oil, but the dirtiest runoff is at the very beginning of the storm. The worst of the water probably stays in stormwater pipe rather than going into Green Lake.

Rebecca: Solubles more likely to go into lake than sediments

Gayle: And fine particulates. The pipe was discharging turbid plume today. We will have a summary of nutrient data in January.

### **Monitoring and sampling for algae toxin, microcystin: Gayle Garman, FOGL President**

Microcystin A is the toxin that blue-green algae (cyanobacteria—one of first forms of life) most commonly produce. Two classes of toxins: liver and sometimes nerve toxin. We have purchased a kit. It's like doing chemistry—you have to be careful about it. Supplies have to be kept cold, in refrigerator.

Gayle shared a document from Dept. of Ecology website. Microcystin toxin can build up in your body, so you don't want it. There is a 6 mcg/liter state guideline: if above this, repeated exposure could accumulate and make you sick. Children are more susceptible, and pets. Algae scums tend to accumulate on top of the water. Algae is present all the time. When there isn't wind, they float, and a gentle wind pushes them to downwind shoreline where they build up, and they multiply. That's how we get a scum without a bloom (a bloom is a lot more—e.g., 1999). The kit tests for presence, not exact number.

Gayle demonstrated use of kit and will show those interested how to sample.

Gayle shared a flyer from CDC about protecting pets and other animals from green algae toxins.

The advantage of testing this way ourselves is that we can do it in 6-24 hours, whereas the County takes longer. The October 7 sample analyzed by King Co was 9.2 mcg/Liter. Not many were swimming in Oct. but some cross-lake swimmers. Sample was from the beachy area by Densmore drain. 5 days later there was less than 1 mcg per liter.

Klaus: Does toxin affect the fish even after cooking?

Gayle: It doesn't seem to affect fish and birds. It would be good to get someone from Ecology to talk to us about microcystin in fish

Regarding volunteers to conduct testing, Laila Adams is helping, but she's often out of town. Someone who sees the scum has to let us know, then someone has to sample—basically on call.

We've seen more blooms in the winter—Oct, Dec, Jan, Feb. They're happening at times we don't expect. The most concentrated sample was last Jan. with ice on the lake—more than 60 mcg/liter.

Richard: There is more stillness with ice.

Klaus: How many varieties of algae are in the lake?

Gayle: Many--we don't know.

Rebecca mentioned idea of buying a kit with grant money for using with children—since this is safer than some of the other things they've done. She would want Gayle's advice on sampling appropriately for safety and quality.

Gayle explained how one can practice technique with oil and water. She advised being careful with kids.

→ Schedule visit from Dept. of Ecology to inform us about safety of fish in Green Lake in the context of toxins.

- If you see green scum, stay out of it, and tell others it might be toxic. Also notify Gayle/FOGL for testing.
- Anyone interesting in learning how to do the testing, contact Gayle.

### **Report on first Saturday work parties: October 1 and November 15**

There was a good turnout at the two parties, and the groups got a lot done: weeded 2 habitat restoration sites, flagged all plants. Some died over summer, because of not enough water, but there was a 70-80% survival rate—very good. These areas won't need much attention until the spring. Roses are doing great—native wild roses.

### **December 3: milfoil removal work party?**

For the last 4 years, we have done a shoreline milfoil cleanup in Fall. We've been doing it later each year, waiting for it to accumulate. This year there isn't any dead milfoil on the shoreline, except a little on the west side—in the trees where it's hard to get out. Around the paddleboat dock there is none, where there is usually large accumulation. This raises the question of what to do December 3. Have a party to pick up litter? Take out blackberries? Or cancel?

Karen S.: Maybe it's better not to remove blackberries this time of year because soil might not be held.

Rebecca would like to take a small group of children—they have lots of experience at restoration sites. They will be careful not to step on or take out plantings. She will look first to see how it looks before taking them.

- Send out cancellation announcement for December 3. If milfoil accumulates, we can do a removal party in Spring. Or even do it on short notice before Christmas if it ends up looking bad.
- People can go out and pick up litter any time, or weed in the restoration area. Plants to be left are red-flagged. One site is on a steep bank on the Aurora side by cattails where red-wing blackbirds nest. The other site is 200 yards north of golf course—fenced off with red tape. No permission needed from city, just let FOGL know (could take pictures as well).
- There are no first Saturday work parties in January or February

### **New Issue?: Ground- and stormwater management at Green Lake Village development**

The "VitaMilk site" on the east side of the lake is being developed by Lorig. It's a square block between 71<sup>st</sup> and 72<sup>nd</sup>.

Gayle showed the drainage basin map. The pipe goes down 72<sup>nd</sup> through the park and out just north of the paddleboat dock. Peter Lorig was asked how much underground parking they would build--450 spaces. This means they have to excavate another 12-14 feet. They're already well below water elevation of lake. More ground water will be coming into the hole. They will need to pump ground water out all year. Storm water is not being used on site—it will be collected and go into combined sewer system. Green Lake needs more water—no natural flushing. Green Lake watershed is limited to grassy lawns around the lake and lower Woodland Park, and occasionally Densmore drain. The impact of development will further reduce amount of water that will go into Green Lake. Gayle contacted Ingrid \_\_Wertz\_ from Seattle Public Utility Could it be discharged to Green Lake rather than put into combined sewers? There is already a pipe that goes down 72<sup>nd</sup>.

The pipe is the one they use for discharging drinking water from reservoirs and Ingrid said you can't discharge dirty water. But our observations are that what's coming out is very dirty already. Public comment is over on development, but SPU is still doing a technical review. Can someone explain how they estimate flow? We would like to see that. If it's not a large amount of water, then maybe we don't want to make an issue out of it. The development also won't be charged for flow into system. The City has been trying to split off uncontaminated surface water in several places from combined sewer so you don't have to treat.

Sandy: How did developer get permit for new construction to allow this?

Richard: It can go into combined sewers but can't exceed certain flows, with a containment system.

Gayle: Peter Lorig says they will have an equalization tank on site. I would like to see group support following up with SPU, Mayor's office, Green Lake Community Council—how water is managed is important to Green Lake. This is just one development, a big one. Why isn't DPD or SPU doing something about this—if we're such a green community, why is water being wasted into storm water system, if the lake needs it? It potentially could draw down Green Lake if water table is too low.

Sandy: What happened with the Circa Development? They couldn't go down as far as they wanted to go because they hit the watertable—so they couldn't build as high as they wanted. Also when they remodeled Gregg's, there were just voids (holes) there. The developer probably has done some tests to see what they will need, so we should ask questions.

The condo across the street is worried about settling.

Rebecca: The development will have a PCC and 298 studios planned (55,000 sq ft of retail). Direct some questions to PCC? They should want to hear this.

The property was contaminated with diesel, and there are questions about the ground water (phosphorus)—so there are questions about the quality of the water—we need to know more before pumping into Green Lake. Groundwater is a year round source—that's the advantage.

Ask Lorig to come to meeting in January? They start digging in Feb. Who would we contact at PCC? If Lorig and SPU come in January, should also have PCC and Green Lake Community Council.

We can also set up easels to collect signatures as was done for the alum treatment.

Richard: If it's not a significant amount of water, or if it's contaminated, it's not worth it. But it could be a win-win for everyone—Lorig would like to look good.

Sandy: Even if not the groundwater, the storm water is significant.

Gayle: They are shooting for LEED silver certification, but there will be no green roof—it requires a stronger roof.

- Determine the right person/persons to direct questions and concerns to about the development.
- Investigate water quality issues.
- Invite Lorig, SPU, PCC, and Green Lake Community Council to the January meeting.

### **Birders group?**

Gayle: Two groups went birding the last 2 Saturdays. More participants signed up than could be accommodated. We would like to start a birders group. It's consistent with FOGL's purpose. Part of habitat restoration is to encourage wildlife. The Audubon Society has never been that interested, (Green Lake is too urban), aside from Martin.

The group's purpose would be focused on Green Lake (as opposed to birding elsewhere). Is there a group of people in FOGL who want to be bird focused?

Karen S.: We could put in our newsletter to see if there is interest, with a couple of possibilities of what group would do.

→ Write up a piece for the newsletter to determine interest in FOGL birder group.

#### **Other/new business**

The City only renewed the pitch-and-putt golf course contract for just 1 year. They want to consider someone or something else that will generate more revenue. A different operator? According to \_\_\_Dewey Potter\_\_\_, there is no intent to changes uses, possibly change operators, including adding a food vendor or small restaurant at the site. FOGL is interested in this process, as is the Green Lake Community Council.

→ Follow up with \_\_\_Parks Dept\_\_\_ to monitor the situation.

**Next meeting is Tuesday, January 24, 2012 (FOGL meets on the fourth Tuesday).**