

Friends of Green Lake

Meeting Notes and Minutes from February 23, 2010

Attendance: Gayle Garman, Ellen Hewitt, Karen Schurr, Gene Williams, Marcia Norman, Deborah Bonjouklian, Richard Fleming, Patricia Harris, Kevin Stoops, Sarah Swearinger, Brian DeLuca, Rob Zisette.

Presentation on Milfoil: Kevin Stoops, Director of Planning and Development, Seattle Department of Parks and Recreation, reported based on a paper he had written for presentation to North American Lake Management Society (NALMS) in late 1990's regarding milfoil at Green Lake, called "Harvest Today, Eradicate Tomorrow: Eurasian Water Milfoil Control in Green Lake, WA." Highlights of Kevin's presentation:

- Eurasian Milfoil first found in the NW in the 1970's. In summer it forms surface mats of long, tangled stems. The stems die back each winter, but re-grow each spring from food stored in the roots. Any piece of broken stem with a leaf node can grow a new plant.
- 1981: survey of Green Lake shows predominance of native Elodea
- 1983: Green Lake survey shows presence of Eurasian milfoil, which in a few years had covered 75-90% of Lake's surface
- Green Lake is perfect for milfoil growth because most of the lake is less than 12 ft deep
- The options to control milfoil: pulling roots out by hand (usually requires scuba divers), hand raking, putting in bottom barriers, mowing with an aquatic harvester, roto-tilling sediment to dislodge roots), suction dredging, administering herbicides (which releases nutrients when dead milfoil decays), or biological controls such as stocking with sterile Grass carp, which feed on milfoil.

In the late 1990's bottom barriers were installed at the swimming beaches, the small craft center, and in the southwest corner which was heavily used by wind-surfers.

In the early 1990's the Lake was "choked with milfoil", and the aquatic harvester was purchased. It had stainless steel blades and ran on food grade oil. It cut a swath 8 ft wide to a depth of 5 ft below the water surface. For optimum effectiveness it was important to: move harvester slowly to avoid bow-waves, cut on varying courses, and skim fragments after cutting. Seattle Parks ran the harvester on Green Lake for 5 years. Harvesting is a short-term response to symptoms of milfoil, it has to be done repeatedly, and annual cost can be quite high (\$100,000 in 1993).

In 1997 permission was granted by WA Dept of Fish and Wildlife to plant 777 grass carp. The problem with the grass carp is they eat all other plants before they eat milfoil; so they eradicate all native aquatic plants before they eat milfoil. Only a few surviving grass carp were found in GL during the 2005 fish survey.

Milfoil seemed to die-back during early 2000's, when there were intense algae blooms on Lake. There was concern milfoil would re-grow after the 2004 alum treatment, so in 2005, the Parks Dept contracted with Herrera Environmental Consultants for a milfoil survey and map. The 2005 Herrera survey shows about 10% of Lake with dense milfoil, predominantly located between "Duck" island and the shore, and along the edges of the water lilies. In more recent years, dense milfoil has expanded offshore of these areas, and dense stands have also grown-up around the paddle-boat dock, and in the Lake's southeast corner.

The harvester is currently being refurbished for Lake Washington beaches and, maybe, Green Lake.

Kevin suggested that the next step in milfoil control would be to reassess how much milfoil is currently in the lake. There was a short discussion regarding how to do this by members of FOGL. No decision was made on how to proceed.

2009 Monitoring Summary: by Richard Fleming, Ph.D. (rescheduled from Jan). RSF discussed the highlights of rainfall and WQ sampling in Green Lake in 2009, conducted by FOGL volunteers as part of King County's Lake Stewardship Program.

Rainfall in 2009 was comparable to earlier years with a few exceptions: Rainfall between January 5th and 8th caused overflows from the Densmore Drain into Green Lake. Spring rains were modestly higher than normal and cumulative rainfall remained above normal throughout the year.

Green Lake Water Quality measurements in 2009 showed that spring and early summer water temperatures were above normal and the lake "stratified", that is, surface water was several degrees warmer than water near the bottom. Most of Green Lake is ten to twelve feet deep, except for a trench in front of the Hearthstone, where depths reach 27 feet. Winds are generally from the southwest or the northwest, and any persistent wind mixes the surface water with the deeper water. Green Lake started to stratify in mid-May and the stratification continued through June. In early July, winds were sufficient to mix the water and the stratification was lost. During a subsequent calm and sunny period lake surface temperatures (measured 3.3 ft below the water surface) reached the highest temperature recorded over our five years of sampling: 78.8 degrees on August 3rd.

Water clarity (mid-lake) was good throughout the summer and exceeded the management goal of a Secchi Disk reading of two meters (6.6 feet). Secchi Disk readings were 10 to 15 feet throughout the late summer and fall. In 2009, Green Lake did not experience the very high water clarity that occurred in late summer 2008. The continuing high water clarity indicates the April 2004 alum treatment, designed and implemented by the Seattle Department of Parks and Recreation, is still effective and controls algae blooms.

Webmaster Report: Posting the weekly measurements of water temperature and clarity taken by science class at Billings Middle School. They will make a summary report for 2009 at the next meeting. The new 501c tax ID number will be added to the website.

President's Report: Follow-up from Jan meeting. Richard Fleming, Monitoring Chairman, sent a **letter and photos to T. Gallagher, Superintendent** of Seattle Parks, noting FOGL's dismay about the removal of shoreline vegetation, contrary to the Green Lake vegetation plan, and how this harms bird habitat.

Gayle collected a **shoreline algae scum sample on Jan 29** which was evaluated by Sally Abella of King Co DNRP, Freshwater Assessment Group, who responded that the sample was mostly bryozoan statoblasts and diatoms. Also present were two species of colonial green algae, and two species of Anabaena. Sally's email concluded "any Anabaena is a reason to monitor surface accumulations around the edges of the Lake".

Other correspondence was received about a possible neighborhood cleanup by the Mars Hill Church. Depending on the date, FOGL may co-ordinate with a shoreline cleanup. Lifestyle Chiropractic is donating 25% of fees from new patients in March to FOGL.

Treasurers Report: A new bank account needs to be opened with the 501c tax id number. After a brief discussion, Patricia Harris **motioned** that FOGL reopen an account at BECU. Ellen Hewitt seconded, and a unanimous vote approved the motion.

Donations: Total of \$200 since last report. Bank balance is \$3,451.00

Meeting Adjourned at 9:05.