

Friends of Green Lake Meeting Notes

August 26, 2008

People Present:

Bill Wilson (new), Jerry Semrau, Rick Johnson (Seattle Public Utilities), Sheila Harrison (contracted engineering firm), Frank McDonald (Seattle Public Utilities), Richard Fleming, Marcia Norman, Mary Lou Knox, Kevin Stoops (Seattle Parks & Recreation), Gayle Garman, Kris Fuller, Rob Zisette, Ellen Hewitt

A. Water Inputs to Green Lake

Richard Fleming, FOGL

1. Local street drains around Green Lake empty into the combined sewers and bypass the lake. Most water entering Green Lakes comes from rain on the lake surface. Storm water entering Green Lake comes via the Densmore Drain. The Densmore Drain carries runoff from as far north as Bitter Lake and from along Aurora Ave to the City boundary at N 145th. The Densmore Drain overflows into Green Lake after long or intense storms.
2. One problem area is south of the cemetery on Aurora at 107th and Midvale. There is a closed depression east of Aurora Av. with no surface outlet.
3. The sewage pump station at 107th and Midvale was flooded with 4 feet of standing water during the Dec 2-3, 2007 rainstorm.

B. Planned improvements to the Densmore Drainage Basin

Frank McDonald, Seattle Public Utilities (SPU)
(Power Point presentation)

1. 96% of Seattle sewage is moved by gravity flow.
2. North of 85th, street drains convey storm water separate from the sanitary waste water system. There is a pump station at 107th to lift the sanitary flow to the METRO trunk line indicated as the big green line on the map. Under the street there is a large detention/storage tank to hold sewer flows in excess of the pump capacity.
3. In the December 2007 storm, the flows in the sanitary sewers exceeded the capacity of the pumps and the storage tank filled and overflowed into the surface runoff system via the Densmore Drain and then to Green Lake. A storm with the intensity of the December 2 & 3, 2007 event was estimated to occur only once in 250 years. During the December 2007 storm, surface water entered the sewers through the street manhole covers. Plastic covers are being installed at the manhole covers to stop this infiltration.

4. Volume calculations determined that 95,000 gallons of combined sewer overflowed into the Densmore Drain and entered Green Lake. Though the pump was submerged during the storm event, it continued to operate for the entire 15 hour period. Water flow into the system during the storm was 200,000 gallons/hr versus a normal 50,000 gal/hr.
5. Gayle suggested that the flows from the Densmore Drainage into Green Lake be measured so that we could make a more accurate determination of the Green Lake water budget. Rob Zisette said it was difficult, but possible, because flows from the Densmore Drain normally pass around the lake and enter the lake only at high flows when they “jump” the diversion weir.
6. Water Quality Sampling –
 - a. SPU doesn’t sample either water or bottom sediments at Green Lake.
 - b. Seattle/King County Public Health monitors swimming beaches and King Department of Natural Resources - Small Lakes Program monitors water quality (nutrients, temperature, clarity) at Green Lake using FOGL volunteers to collect the samples.
7. Inspection of Facilities (Businesses)
 - a. SPU inspects facilities annually under Surface Pollutant Source Control Program.
 - b. Private facilities include high risk businesses such as fuel facilities and car washes.
 - c. Illicit Discharge Elimination Inspections are done in the dry months using dye.
 - d. King County is responsible for the above inspections and for industrial waste properties. They look for un-permitted discharges.
8. Surface runoff Catch basins are inspected/cleaned annually. If 60% full of debris, they are cleaned.
9. The Densmore Drain discharges into Green Lake at a structure on the shoreline near the Wading Pool. The grate that covers the outfall will be modified this fall so that it will not pop off during high flow events. Without a secured grate, the drain is hazardous to waders and adventuresome children, because a high-flow can “pop it”.

C. Drainage Improvements

Rick Johnson, SPU

1. The Densmore drainage basin covers 2.7 sq. miles. The area North of 85th Street was annexed by the City of Seattle in 1950. Most of the current drain system in this area was built during the un-incorporated time period. It is largely a ditch and culvert system.

The original natural drainage to Green Lake was from as far north as Haller Lake. Haller Lake drained through a swampy meadow, west through what is now the Puetz driving range into the 107th and Midvale depression. Other flows from Bitter lake traveled south and into Green Lake. Outflows from Green Lake flowed down a stream (now a sewer) under Ravenna Avenue to Ravenna Park and into Union Bay near University Village.

2. SPU's 2003 Basin Study indicated a need for approximately \$149 million in drainage improvements in the Green Lake basin to achieve a 25 year level of service. There is still \$60 million in unmet drainage needs.
3. SDOT Aurora Project-
 - a. There must be treatment for water quality and flow control
 - b. The volume of Stone Pond (near Puetz Driving Range) must be increased.
 - c. Additional parts of the program would include more surface water detention facilities in the upper basin, and more natural drainage systems or green storm water infrastructure projects.
4. Storm Event comparisons – In December 2006, the storm produced 1 inch rain in 1 hour. The December 2007 event produced 5 inches of rain in 24 hours. The first storm was short and intense; the second was just a huge amount of water in 24 hours.

D. Prioritized Action

1. Emergency Repairs – Repair the berm near Puetz driving range
2. There is ongoing infrastructure condition assessment going on with rehab as necessary.
3. Operation and Maintenance activities include public education and outreach.
4. Storm season preparation includes work at 107th and Midvale, improvements at Meadowbrook Pond, work on Madison Valley problems, Thornton Creek work, and projects at Matthews Beach.

E. Friends of Green Lake Business

1. Standing Committee Reports –

Monitoring- Richard Fleming – It has been a strange summer. The water is remains clearer than prior summers and well mixed, little stratifications of water temperature.
2. Webmaster – Ellen Hewitt says we will shift to fall pictures on the website.
3. Treasurers Report – Mary Lou Knox

Savings \$ 2,469.72
Checking \$ 852.40
TOTAL \$ 3,322.12

4. Corresponding Secretary – Marcia Norman – thank you notes were sent out to five contributors.
5. Tax exempt status - 501 3c – Gayle Garman – Gayle wants to finish up and submit the application to the IRS. Two attorneys have offered to review it.
6. Power Boats – Both the Green Lake Community Council and Friends of Green Lake have taken the position that power boats do not belong in the lake. Each has sent (or will send) a letter to the Superintendent of Parks and Recreation.
7. Kevin Stoops, SP&R – 88 people did the Healthy Park, Healthy You Race. A couple of hundred attended.

Meeting adjourned at 9:05pm.