

Friends of Green Lake

Meeting Notes

April 27, 2010: Milfoil Teach-in

Attendance: Gayle Garman, Karen Schurr, GeneWilliams, Ruth Callard, Jane Doughty, Marcia Norman, Richard Fleming, Gavin Hashimoto (a presenter for Billings MS), Alex Klein (also a Billings MS presenter), Sarah Swearinger (8th grade science teacher at BMS), Rob Zisette, Joel Tufel, Charles Ehlert, Mickey Schurr, Deb Bonjouklian, Brian DeLuca, Patricia Harris

Monitoring Report: Students, Gavin Hashimoto and Alex Klein presented their report of temperature and its relationship to water clarity, as measured with a Secchi disc, and the relationship between the lake level and precipitation for weekly measurements from September - December 2009. In neither situation did their analysis show that this single factor alone was responsible for the changes. The wind, the controlled outlet of the Lake and other factors also impact the clarity and water level. Richard Fleming noted that their graph of lake level documented the several weeks at the end of 2009 when the screen in front of the Meridian Drain was clogged with debris, which caused slowly increasing water levels until it was cleared. Gavin and Alex concluded that a direct correlation between Temperature/Clarity and Water Level/Precipitation was not observed.

Presentation: The theme of this evenings meeting was a “Teach-in on Eurasian Water Milfoil” modeled after Earth Day activities. The following presentations were made:

Introduction: Richard Fleming presented an overview of milfoil including these bullet points:

- Milfoil is a rooted, perennial, submerged, flowering plant.
- The Eurasian Milfoil that contaminates Green Lake most likely came to this country via big ships dumping ballast water into the Chesapeake Bay as early as 1880. Eurasian Milfoil is now in North America, Africa and Australia
- Milfoil plants die back to the root/tuber each winter; in the spring new stems start growing toward the water surface and eventually form a mat at the surface that shades other submerged aquatic plants
- Each piece of stem that has a “leaf-node” can root and start a new plant
- Problems include clogging swimming areas, boat channels, waterways, and may cause offensive odors and provide breeding ground for mosquitoes and other insects.

Deborah Bonjouklian presented on manual methods of removing milfoil: hand pulling, cutting and raking. Highlights of this presentation:

- Handpulling is inexpensive if done with volunteer labor,
- Handpulling is easy to do; but it disturbs bottom dwelling animals, and must be repeated regularly.

- Cutting and Raking do not remove the plant by the root, so the plants often grow back. These methods also require special equipment and a certain level of experience to effectively remove the plants.
- All three of these methods are labor intensive, must be regularly repeated, and require removal of pulled plants far from the water's edge.

Gayle Garman had a presentation on the dredging techniques used to remove this invasive weed from lakes. There are basically two types of dredging: suction devices (large vacuum) and sediment removal.

- Suction removal is effective and efficient because the diver guides the vacuum to remove only the harmful plants. However, suction is expensive and disposal of dredged material (water mixed with mud/sediment) is problematic.
- Green Lake sediment may be too rich in nutrients and/or contaminants to discharge back into the Lake.
- Dredging also requires permits from several different agencies.

Karen Schurr's presentation covered the biological control methods to remove and/or contain milfoil. The two most common of these are grass carp that eat the milfoil and milfoil weevils (bugs) that damage the plant.

- Grass carp were added to Green Lake in the mid-1990's, before it was known that they only eat Eurasian milfoil after they've eaten all the other aquatic plants
- The result is all native aquatic plants are eradicated before the carp reduce or eliminate the Eurasian water milfoil. They are not recommended for Green Lake because they could kill all aquatic vegetation, reducing habitat for fish and fish-eating birds.
- The weevils are native to Washington because there is a native milfoil they use.
- The weevils bore holes in the stems of the plant which reduces its growth.
- Weevils have been found in Washington lakes and should be further investigated for Green Lake.

Richard Fleming presented the types of bottom barriers and how they should be installed for adequate coverage and optimum use.

- Bottom barriers are a sheet of porous plastic or fabric tacked to a frame that is placed on the bottom of the lake, covering the milfoil and everything else underneath the barrier.
- Washington requires a permit and specifies barrier removal within 2 years, unless the barrier is burlap, which decays.
- Bottom barriers can be constructed and put into place by volunteers.
- Best suited for small areas around a dock or swimming beach.

Rob Zisette delivered a presentation on using herbicides for milfoil control. (Gayle – I hope you have notes for this because I do not!)

- Herbicides have been successfully used in other lakes in Washington state.
- Least expensive treatment for widespread infestations and only hope for eradication.

- There are herbicides that specifically target Eurasian Milfoil and do not harm other plant life or animals.
- Two mechanisms: 1.) burns vegetative plant parts but root survives, or 2.) systemic herbicide kills the entire plant.
- Washington allows the use of 6 herbicides to treat/eradicate Eurasian milfoil
- Endothall or Diquat are applied in early summer; requires Lake closure to swimming and fishing for about a week. (Contact herbicides).
- Fluorodone is systemic but it isn't selective, it interferes with plant pigments
- 2,4 D and Triclopyr TEA (Renovate) are both systemic and selective
- Triclopyr was used on Capital Lake in Olympia and Mason Lake in Snohomish County; it is fast-acting and can be either a granule or a liquid
- 2,4 D BEE is only used in granular formulation, slow release and then rapid conversion to non-toxic acid so it is tolerated by native pondweeds and elodea

After a motion to continue the meeting, **Gene Williams** shared a video showing underwater hand pulling by divers. There was quite a lot of turbidity in the water when the roots were removed, making it hard to see remaining plants needing removal.

Meeting adjourned at 9:30 pm.