

Lake Ballinger Watershed Forum
March 24, 2009

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I am a member of Lake Forrest Park Streamkeepers and the Lake Forest Park Environmental Quality Commission, although my comments today do not reflect any official positions of either of those organizations. Given my participation in those organizations, I tend to look at the flooding problem from an ecosystem, and habitat, point of view. The Lake Ballinger and McAleer and Lyon Creek habitat problems are fairly well known; some are directly related to flooding, and all are associated with stormwater runoff.

I am most familiar with the habitat problems of the two streams. Both are listed on the Department of Ecology's 303d list of impaired waters. Lyon Creek is listed because of high levels of fecal coliform bacteria, and McAleer Creek is listed for fecal coliform levels and low levels of dissolved oxygen. Both bacteria and low dissolved oxygen can be linked to animal and human waste as well as nutrients from fertilizers being washed into the streams.

Increasing acidity has been noted in both streams, although pH test results are generally still within state standards.

Sediments in Lyon Creek have been found to contain high levels of DDE, a product of DDT, now banned. This chemical is toxic to insects and other animals that live in the streambed, and becomes toxic to fish and other stream inhabitants when sediments are disturbed during high water flow events. King County has found increasing conductivity of the water in both streams, indicating dissolved substances. Lyon Creek is under study by NOAA as part of its investigation of a phenomenon called "pre-spawn mortality" in which returning female coho salmon die within hours of entering most streams in Western Washington. Elevated levels of pyrene, nickel, combustion products, plastic chemical residues and lube oils have been noted on McAleer Creek.

Both King County and the Lake Forest Park Streamkeepers have conducted inventories of aquatic insects on McAleer and Lyon Creeks. This type of monitoring is generally considered to give a true insight into stream health, as it looks at the numbers and types of creatures that actually live in the stream. Results for both streams consistently fall in the Poor to Very Poor range. Excessive sedimentation from erosion is a major factor in poor results.

Considering the possible actions described in Technical Memo #2, ideally, I would like to see properties purchased to provide immediate relief to residents and businesses that can expect additional flooding in the future, and full wetland restoration in those locations. That would certainly buy time to address the longer-term issue of controlling stormwater runoff into Lake Ballinger and throughout the watershed. If the buy-out option is not feasible, flood-proofing measures might afford some relief.

One possible action that I think we would all like to see in place now, if we could wave a magic wand, is low impact development (LID), the variety of techniques that allow precipitation to be absorbed at or near the point at which it falls. The discussion in Technical Memo #2 includes requiring LID on new projects, and retrofitting LID features on developed properties. This would involve installing bioswales and other water retention features on streets, replacing parking lots, driveways and sidewalks with pervious surfaces, installing rain gardens on residential,

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commercial and public properties, and extensive revegetation, possibly including green roofs – throughout the watershed, not just around Lake Ballinger.

While the value of LID is discussed in the memo, it is not reflected in the list of potential actions (Table 3), due to the perceived length of time needed to implement. It is true that complete retrofitting of the watershed area might take 50 years or longer, but I believe that significant progress could be made in a much shorter period of time. I would urge the jurisdictions making up the Lake Ballinger Watershed Forum to make the LID strategy paramount, starting immediately, with the goal of reducing stormwater runoff by 30-50% over the next 10 years. That would mean providing incentives such as financial assistance and technical expertise, as well as strong community education. In a similar vein, each jurisdiction should move aggressively to implement its NPDES permit.

I believe upgrading culverts on lower McAleer and Lyon Creeks should also go forward as quickly as possible.

Although it is considered a long-term step, it seems to me that a new weir to better control outflow from Lake Ballinger is an idea that deserves further consideration. A weir that was easier to operate and had greater range and outflow precision might help to better control lake levels while minimizing downstream damage, for example, gradually drawing down lake water prior to a major storm event.

On the surface, the proposal for a high flow bypass pipe to divert water from Lyon Creek directly to Lake Washington, seems questionable to me. In addition to extensive installation disruptions, such a system would require regular maintenance. I hope that other measures can be taken relatively quickly to significantly reduce flooding problems, so that a bypass system is not necessary. Still, I am not categorically opposed to it. If it were shown that stream habitat would not be negatively impacted, and if Fish and Wildlife and other agencies were able to permit specific plans, I would support it.

Finally, I would like to thank the Forum and its consultants for their efforts to date. A lot of good work has been done to identify and quantify the watershed flooding problem and formulate an array of possible solutions. Those problems are certainly not unique to our watershed, but representative of situations across the country and the world. It's really the challenge to see whether or not it is possible to maintain surface water quality in urbanized environments. This Forum, by virtue of its multi-jurisdictional nature and its decision to address storm runoff at the watershed level, is at a great advantage in developing stormwater and flooding solutions that are environmentally responsible, and can provide models for other watersheds.