

LAKE BALLINGER/MCALEER CREEK WATERSHED FORUM MINUTES

Remote meeting via videoconference

(Zoom)

May 17, 2022 2PM to 3:30 PM

Call to Order

Chair Diane Buckshnis called the Lake Ballinger Forum Meeting to order at 2:00pm

I. Roll Call - Welcome and Introductions

- a. Approval/updates today's agenda
- b. Approval of minutes from February 15, 2022 meeting

Attendees:

- Jeff Betz – Recreation & Parks Director, Mountlake Terrace
- Nathan Blackwell – Reporter, MLT News
- Diane Buckshnis – Councilmember, Edmonds
- Ken Courtmanch – Facility & Parks Superintendent, Mountlake Terrace
- Donnelle Dayao – Parks Project Manager, Mountlake Terrace
- Derek Fada – Environment & Surface Water Supervisor, Lynnwood
- John Featherstone – Surface Water Utility Manager, Shoreline
- Don Fiene – Former City Council Member, Lake Forest Park
- Rikki Fruichantie – Community Relations Specialist, Mountlake Terrace
- Tracy Furutani – Councilmember, Lake Forest Park
- Philip Hill – City Administrator, Lake Forest Park
- Nick Jarrell – Project Manager, WSDOT
- Jeff Johnson – Mayor, Lake Forest Park
- Patrick Johnson – Stormwater Technician, Edmonds
- Eric LaFrance – Public Works Director, Mountlake Terrace
- William Lider – Stormwater Engineer, Sno-King Watershed Council
- Warren McAndrews – President, Lake Ballinger Residents Association
- Tim Nau – Assistant Project Engineer and Project Manager, WSDOT
- Dale Newman – President & CEO, Nile Shriners Club
- Tim Nye – Public Works Supervisor, Mountlake Terrace
- Ruth Park – Fish Passage Environmental Specialist, WSDOT
- Kari Quaas – Community Engagement Manager, Snohomish Conservation District
- Laura Reed – Stormwater Program Manager, Mountlake Terrace
- Zack Richardson – Surface Water Engineer II, Shoreline
- Julie Rose – Resident, Edmonds
- Keith Scully – Mayor, Shoreline
- Tricia Shoblom – Lake Specialist NW Region, Department of Ecology
- Andrew Silvia – Project Manager, Lake Forest Park Public Works

- Bob White – Resident, Lynnwood

II. Comments from WSDOT staff on the project to replace the I-5 culvert on McAleer Creek

Tim Nau, Assistant Project Engineer for WSDOT, presented an overview of the I-5 McAleer Creek Fish Passage. He discussed the existing condition and current problems, included a couple examples of new fish passage structures, reviewed the project timeline, and provided options for the public on how to stay up to date on this project. WSDOT has corrected 365 barriers since 1991, improving access to more than 1,200 miles of upstream habitat. While significant progress has been made since 1991, a 2013 Federal Court injunction required WSDOT to speed up the pace of fish passage work in Western Washington. A culvert may be impassable for many reasons; for example, the flow is too fast, or the pool in front of the culvert (and the water running through it) may be shallow, or the culvert may be too high for fish to successfully jump into the culvert and progress upstream.

The culverts on I-5 McAleer Creek have structures that are too small, too steep, and too shallow for successful fish migration. Replacing them with larger structures increases the likelihood that fish will be able to migrate successfully. McAleer crosses I-5 just north of the SR104 interchange; that culvert will need to be replaced. Also to be replaced: the culvert underneath the westbound to northbound on-ramp and the northbound to SR104 off-ramp. WSDOT expects sockeye, coho, chinook, sea-run cutthroat, resident trout, and steelhead to be able to pass through all three of these new structures after the culvert replacements. The other culverts downstream of these culverts within the WSDOT right-of-way are not fish passage blocks, and will not be replaced.

This project is being built under a “design-build” contract. Under a design-build contract, WSDOT completes the preliminary design work, and creates roadway closure parameters that a contractor must work within. These parameters are developed based on past experience and construction data. For example: how long it takes to excavate a defined area, how much time it takes for concrete to cure; all this information is factored in. The design-builder we select for this project will create the design for the project, and will be encouraged to develop efficient techniques that will reduce construction time, roadway closures, and overall cost.

With that in mind, it is anticipated that the contractor will build the following structure for I-5: A 30-foot wide bridge under both directions of I-5 culvert (#1), and a bridge or box culvert under the access road and ramp culverts (#2 & # 3.) The design-builder will complete the final design of these structures, and then submit them WSDOT for approval.

Moving to project timeline, developing the design, WSDOT input, and contracting will take the rest of the year and into next year. WSDOT calculates that it will take about five years to complete the work, so it’s still too early to determine a construction schedule.

Work could start as early as 2024, and at minimum, I-5 closures for the project will last through 2028.

WSDOT is committed to keeping folks updated on this project and over the next couple of months WSDOT will collaborate with local agencies and area tribes. Local government will be briefed about the work. Closer to construction, and during construction itself, WSDOT will provide regular project updates to the public as well.

Questions

Q. Bob White (resident): Is there a problem with the present structures, is there restriction to the water flow or fish passage?

A. Tim Nau (WSDOT): No flow restriction, but as a fish passage, yes. We are out here to fix this as a fish passage problem. The water is too fast, and it's too high, and not good for fish passage. Instead of being a culvert or round pipe firehose of water, what we will build is something that looks like a stream or creek underneath the roadway, so the fish feel more comfortable.

Ruth Park (WSDOT): After checking what the Washington Department of Fish & Wildlife (WDFW) report says about this particular crossing, it looks like a slope barrier. Which means that the slope is too great and too long for the fish to be able to get upstream with ease. WDFW has a few different ways that they categorize barriers, and this one is considered a slope barrier for fish migration.

Q. John Featherstone (City of Shoreline): Are the hydraulics of the crossing expected to have downstream impact or flow changes? Has the analysis been done (or pending) so that the downstream jurisdictions can make sure we are aware of that change? Also, will the removal of this fish passage barrier affect other downstream fish passage barriers? Is WSDOT aware of them? What can we expect to be affected by the removal of the upstream fish passage barriers, for our own fish passage barriers?

A. Tim Nau: WSDOT is in the process right now of creating a preliminary hydraulic design, which is a very preliminary hydraulic design of what we want. We know enough so far that we know we want a thirty-foot wide culvert minimum, and what the slope can be for fish passage. We are still finishing up that preliminary hydraulic design, and as part of the design-build process, the consultant for the design builder will have to create a final hydraulic design of the culvert, which has to be approved by WSDOT. We have looked downstream - part of the hydraulic study does look downstream. WSDOT is under an injunction (court order) which makes us restore 90% of upstream habitat by year 2030. As such, we are only looking at culverts that are under WSDOT roadways; we can't look outside of that area. We can only look to make sure our culverts are working correctly. We are very restricted by the way the court order is written, and how funding is done. Yes, there are blocks downstream, and I'm not a 100% sure, but reading the flood report from 2009 it sounds like there are issues downstream, but it's outside of WSDOT purview. We can't do it. As an overall approach, I wish we were working by fish corridors, but we doing this work by jurisdictions.

John Featherstone commented he wants to make sure that Shoreline reviews the hydraulic report, to see what the downstream peak impact changes are, if any.

Tim Nau: McAleer Creek does not cross any other state roadway except 522 (in Lake Forest Park), and he doesn't remember what priority that crossing is in the fish passage program. WSDOT is right now trying to get an internal review done on the hydraulic design for the I-5 work, and afterwards they will send it out for external review to WDFW, local tribes, and the cities. At that time, you will get a copy for review. Ruth Parks commented that WDFW doesn't consider the crossing under 522 a barrier.

Q. Andrew Silva (City of Lake Forest Park): Can you describe in general terms the performance expectations and impact considered permissible hydraulically for the downstream community?

A. Tim Nau: There are approximately 14 sections to a PHD (a WSDOT project document) with a lot of information in them. We look at existing conditions, downstream conditions, future conditions...and the final has more sections. We do look at what will happen downstream. As Ruth noted, this is a sloped culvert; we will do a preliminary flood analysis to see if we would flood anything downstream, and what the impacts would be.

Ruth Park: We do a lot of modeling in these preliminary hydraulic designs and we model at various flood events. So we model a 2-year event (which is the average ordinary sort of flow), a 10-year event, a 25-year event, and a 100-year event (that would be a very high flow event where flooding probably occurs now.) We have to ensure that our crossing can handle all of that flow, and still maintain fish passage. So, we are looking at a wide variety of flows, we are not changing the quantity of water that exists in the system, we are simply getting our blockage out of the way. But what we do in those studies is to take a big geomorphic perspective. We look at the entire system to understand what is going on, what's the history, what the landform is like, and how does our change ripple out. This fish passage program is a big shift for a lot of folks. Streams have previously often been hidden under roadways and under other structures; we are having to figure out how to make the infrastructure and the streams work better together, and the way to do that is to get out of the way of the stream, and allow the natural processes to occur. Streams are dynamic; they change all the time, that's how water works. They shift; this will become our new normal. WSDOT's task here is to get out of the way of the natural processes, to let shifts occur. We are mindful that there are land uses up and downstream that are not always conducive to natural processes. There is a tension there; we are committed to working with jurisdictions to resolve this. There are things that we can do within our project footprint; and some that we aren't able to change and that may be the responsibility of other land owners.

Mayor Johnson (City of Lake Forest Park) commented that Lake Forest Park is the king of small cities for fish passage culverts. We are working on another six right now. We are proud of that fact that we took off a whole neighborhood off the flood plain because of our culverts, including the culvert that goes underneath 522. Currently, it does not cause problems, but if the volume of water increases enough, it will be a problem. I do

not want to see those neighborhoods put back on the flood plain map. We are concerned about volume, it's important to Shoreline and to us. We are where the fish are coming from first, out of the streams into the lake. We will be watching this very careful, because of the work we've done downstream already. We are looking forward to working with WSDOT this project. It has been talked about for many years and it will be great to see it done.

Q. William Lider (Sno-King Watershed Council): Does WSDOT anticipate this is going to be a cut and cover or directional bore?

A. Tim Nau: We normally do a cut-and-cover, but since we're considering the approximately twenty lanes wide of I-5, and by the time you add the ramp, I-5 has 250,000 vehicles per day; we can't shut down too many lanes. Trying to do anything in this roadway is going to be tough. A cut-and-cover approach is probable, but I am not 100% sure. We have looked at a top-down tunneling that will not shut down I-5 at all, but it's not cheap. The design-builders have the option to be creative, and we allow for innovation.

Q. William Lider: Does WSDOT have plans to put any skylight or daylight portions of the pipes in the median areas between the highway, so that the fish will have some natural light to help guide them through the tunnel?

A. Tim Nau: WSDOT doesn't have the PHD out yet. We have a fairly deep tunnel without a lot of gaps in it, but we're looking into that. We have heard from other states that they are actually put in lighting in tunnels, because fish don't like sudden dark breaks as they migrate.

William Lider commented that he would encourage WSDOT to make this one of the parameters for the design-build requirements (mandatory lighting or natural lighting) where possible, particularly in the median strips between the highway or other interchange areas that are grassy: open those up.

Q. William Lider: Will this project be done under seasonal construction, will it take place during summer-time conditions?

A. Tim Nau: WSDOT builds during the winter. There is a fish window where we can't be in the creek below the ordinary high water mark, but a lot of the work can be done during the winter.

Q. William Lider: Will WSDOT build a parallel creek and keep the creek intact while building the construction project? The concern is that digging in the creek during slow flow will generate a lot of sediment, and releasing sediment downstream can be harmful to the fish and harmful to other aquatic organisms, including macroinvertebrates. The thought would be to build a parallel creek to basically keep the existing creek intact and when the final parallel creek is completed, flip the creek into the new one and abandon the old one.

A. Tim Nau: This concept has been an alternative when WSDOT was looking into how

to build this. It can be an alternative, if they (the design-build team) want to go that way, that's fine, we won't say no to it. There is some movement that we can tolerate and still make it look like a natural stream, and then take out the old stream. If it is a live stream that we are working in, we actually do a bypass system. They are not allowed to dig in the water when the stream is active. They have to get the water out of the way, and then work on the stream bed. We make sure all the sediment is taken care of before we allow the stream water to leave the project site, but by the time we are done, there will be little to no sediment coming off the stream. Streams do erode and sediment does go places. That's a natural process, and we are very conscious of the environmental issue.

William Lider suggested that WSDOT write these certain parameters and overall specifications into the design-build process. He encouraged WSDOT to have this well-thought out, and asked to receive copies of the preliminary design drawings as they progress.

Nick Jarrell, Project Manager, WSDOT remarked on William Lider's question regarding the proposed lighting. He commented that in that particular section of I-5, there is no available median to do this, it would take considerable shift in alignment of I-5 in order to do this, which would really cause a break in the design.

Don Fiene (Lake Forest Park resident): When the Forum was formed, all the jurisdictions were dealing with flooding issues. Lake Forest Park was having a big problem as the lower watershed, from the amount of water that was being received from the upper watershed. The upper Lake Ballinger watershed is about 3,566 acres. All the runoff that goes into Lake Ballinger comes to Lake Forest Park. The current culverts under I-5 were the only constricting control mechanism on the amount of water coming out of the watershed. In addressing our flooding issues, we relied on the Forum's agreement that the 60 inch culvert under I-5 was the controlling factor. This limit was used to design the affected downstream culverts on McAleer Creek, of which there are five, including the culvert that goes under Highway 522. We were able to resolve our flooding issues by taking this into consideration, and also by preventing Lyon Creek from jumping out of its bank and joining McAleer Creek. If the culvert is enlarged, it will increase the water flows that come out of the upper jurisdiction, and it will result in flooding both our neighborhoods and the commercial center, possibly closing Highway 522. The Forum needs to be sensitive to those issues, because it will definitely put us back under water.

Tim Nau: One of the newer chapters that WSDOT is putting into the PHD is a preliminary flood analysis, and it is not done yet.

Don Fiene commented that he believes the Forum is struggling with competing court cases that dictate the maximum height of Lake Ballinger and the maximum outflow, which he believes is 60 cubic feet per second.

Tim Nau stated he has the study from 2009, and it has been evaluated in PHD, and is being reviewed, but unfortunately the PHD is not ready.

Don Fiene stated the he would encourage Lake Forest Park to ensure that if the city will

be subject to higher flows, somewhere in the WSDOT funding there is funding that will allow Lake Forest Park to alleviate those flows by increasing culvert sizes that otherwise do not need to be increased in size.

Tim Nau stated part of the stream improvement is a lot of woody material to create a more natural environment for the fish to swim up. And there are times when flood analysis come back to say that we won't have increases at all. We will wait to see what happens, and this is a very important issue.

Q. Julie Rose (Edmonds resident) asked on behalf of Warren Andrews (Lake Ballinger Residents Association President): How far up and down from the culvert is the hydrologic study taking into account?

A. Tim Nau responded WSDOT concern is inside of the right-of-way. The study goes from the creek all the way through to 1,500 feet outside the culvert.

Q. Julie Rose asked about how to make the design of the weir better to get the right size culvert to mitigate flood concerns, so that water would be able to get both upstream and downstream to reduce flooding?

A. Tim Nau responded that he has very little information about the weir setup on Lake Ballinger, and that it is separate from the culvert issue, and that it is too far outside of WSDOT right-of-way. Increasing the pipe size will create a whole new environment.

Ruth Park commented folks didn't expect WSDOT structures downstream to change. However, WSDOT now has an obligation under the culvert injunction to follow state law, to make fish passable culverts, and met tribal treaty rights as well. WDFW and the tribes are primary partners in coming up with these designs. That is a requirement to the state agency under the lawsuit. This is the first pass, that WSDOT follow water crossing design guidelines.

Laura Reed (City of Mountlake Terrace) commented that there is a U.S. Army Corps of Engineers report from 2009, showing that the removal of the weir upstream of the I-5 culvert would result in a 1/10th foot decrease in the water level on Lake Ballinger. She noted that the weir is completely submerged throughout the winter.

Zack Richardson (City of Shoreline): Concerning the lake level and the weir, there are very interested people looking at that specific topic.

Tim Nau responded: We can't connect the weir to our culvert, we can look at it, but we can't do anything about it.

Ruth Park commented that the culvert has to work with or without barriers; what we build has to work. If nothing of the other infrastructure changes, it has to work if everything else is repaired in the system.

Q. Diane Buckshnis (Edmonds Councilmember) asked who should be contacted concerning the culvert replacements, is private or public partnerships what WSDOT is

looking for, regarding areas outside the designated WSDOT confines?

A. Tim Nau responded that he would recommend speaking to the local city representatives.

Don Fiene commented that he believes this will be more of a Forum issue to resolve than one between an individual jurisdiction and WSDOT.

Diane Buckshnis, Chair - Thanked WSDOT personnel for their attendance.

WSDOT Email Contacts:

Tim Nau Tim.Nau@wsdot.wa.gov

Nick Jarrell Nicholas.jarrell@wsdot.wa.gov

III. Stormwater Management Action Plan (SMAP) overview - Shoreline

Zack Richardson: Shoreline SMAP effort will focus on Boeing Creek basin and not McAleer Creek basin. Shoreline decided primarily to focus on the Puget Sound side of the system because that area had more space and more opportunity for future retrofits.

IV. Announcements & Updates

1. Laura Reed updated the Forum on McAleer Creek maintenance by Mountlake Terrace: two beavers were relocated because they were building dams in McAleer Creek which could cause flooding upstream on Lake Ballinger. Hall Creek and McAleer Creek weirs were adjusted to spring levels.
2. Ecology has awarded another invasive aquatic plant control grant for Lake Ballinger. The grant is \$19,500 over the next two years. The grant will need to be matched at 25% with Mountlake Terrace and Edmonds staff time. Laura Reed manages the grant and implements it. Grant period: July 1, 2022 – June 30, 2024.

Grant deliverables:

- Annual plant survey
 - Event: Clean-Drain-Dry training at Lake Ballinger June 25, 2022
 - Herbicide treatment for the entire lake to treat Eurasian watermilfoil in 2023
 - Public outreach: kiosk signs encouraging volunteer removal of fragrant water lilies and clean-drain-dry techniques.
3. Mountlake Terrace was awarded a grant to start a street and park tree program to increase tree canopy where most needed, including across the Hall and McAleer, Lyons creek basins.
 4. Event: Mountlake Terrace Watershed Discussion May 19, 2022 (virtual)
Event: July 16, 2022 Youth Environmental Education in Ballinger Park 10AM – 12N

Laura Reed discussed with the Forum the elements of Stormwater Management Action Plan. Each city in the Forum will need to develop their plan, due to the Department of

Ecology by March 31, 2023. She discussed Ecology guidance on watershed prioritization. A summary of issues common to water bodies in Mountlake Terrace:

- High bacteria
- Harmful algae blooms (Lake Ballinger only)
- High water temperatures
- Fish barriers
- Fragmented wildlife habitat
- Low dissolved oxygen (Lake Ballinger only)
- Historic toxics (Lake Ballinger only)

Zack Richardson informed the Forum that the City of Shoreline has secured an Algae Control grant for Echo Lake they are currently working on the agreement negotiation.

V. Public Comment

Warren McAndrews commented that the beavers are back in McAleer Creek. Laura Reed promised to pass along this information to the Mountlake Terrace Public Works crews to investigate and request that the beavers be re-homed by the Tulalip Tribe in another location.

VI. Topics for next meeting:

- WSDOT involvement in the Forum meetings
- Overview of the Ballinger Park Hall Creek Habitat Restoration Project

VII. Date and location of next meeting

The next meeting will take place on July 19, 2022 at 2:00 pm at Mountlake Terrace City Hall in the City Council Chambers.

VIII. Adjournment – 3:17 p.m.