Minutes from 1/13/22 YNC Meeting on Miller Park with Public Lands and City officials.

Recap of two-hours meeting with PL Deputy Director Lewis Kogan responding to concerns detailed in a letter to PL and the City December 21, 2021 letter about environmental conditions in Miller Park. The full meeting recording will be posted soon on the YNC website.

Executive Summary

Trees: PL could not answer questions about how many trees were removed during 2015-2019 or whether new trees have ever been successfully planted in the park in the past eight years. Trees are removed during nesting season, but PL said most were saplings. However, trees removed in 2014 were tall, mature trees at canopy level. Confirmed: about 900 trees were removed in 2014, 2020 and 2021.

Birds: Tracy Aviary reported the first official survey in 2021 ever conducted of Miller Park. Main species identified: finches, thrushes, and warblers.

Pesticides and Chemicals. PL has used Tordon and Rodeo in the park. Rodeo is no longer manufactured. PL said it stopped using Tordon but could not say when that occurred. Questions were raised about the chemical impact on birds, bees, and the root system of other trees. PL could not answer questions about how many other herbicides and chemicals are or were used in the park in the past, nor their historical frequency, although PL did say chemicals are applied about 2-6 times a year, interpretating "time" as a series of days.

Water. Public Utilities is negotiating with Mt. Olivet Cemetery to keep water in the Red Butte Creek stream by exchanging stream water for city water. There is also an adjudication in Third District Court.

Sprinklers and Irrigation. PL acknowledged numerous problems and challenges: breakages in sprinkler heads installed under the trail and not flush with the trail surface; deep slopes that make water distribution difficult; reliance on parks for technical help; a water restriction mandate in 2021; and occasional repair delays. Installing a more functional system would be expensive and there is no current request from PL to do so.

Stream Bed. PL said its unaware of problems involving the stream bed. In 2014, it was widened for flood control, with cobble and sand installed to create a "pool and drop" system to benefit aquatic life and birds. For a few years following that adjustment, the stream was often dry at the surface and "disappeared" underneath the new material, but that has been corrected. PL said it might be willing to discuss future adjustments in the stream bed.

TREES

Tree Removal. At least 900 trees were removed from the park in 2014, 2020 and 2021. They ranged in size from tall, mature trees to smaller saplings. Targeted species: Black Locust, Tree of Heaven, and Siberian Elm, deemed invasive. YNC asked PL to disclose how many trees were removed between the "missing years" of 2015-2019. **Lewis Kogan**, **Deputy Director of Public Lands**: "I don't have that data." (**YNC Note**: If 300 trees per year is the average "kill" rate, MBR could have lost 2,400 mature and sapling trees since 2014. To our knowledge, none have been replaced.)

Tree Removal during bird nesting season (April-July). Kogan: "I am certain trees have been removed during that time period. We feel quite comfortable conducting removals of these sapling trees which are generally very small and it's very easy to visually observe a sapling in front of you does not contain a bird nest. So yes, the answer is yes." (**YNC Note:** See advice from Tracy Aviary below about tree-cutting during bird nesting season. In 2014, The Great Salt Lake Audubon Society and petitioners from Yalecrest urged the city not to remove trees during nesting season. Their recommendations were overruled.)

Tree Replacement. Asked if there have been any successful tree plantings or revegetation since 2014, **Kogan** said: "I don't have that data." Asked specifically if any new trees were established in the park in the last two years, **Kogan** answered: "I don't know."* **YNC:** "Who does?" **Kogan** replied, "I imagine that our maintenance team may be able to estimate that. I don't know if we've had any. I know that we've been having some challenges with establishment success of some of the trees, or many of the trees that were planted in 2014 along the trail. I know we went through and invested in some ground level and coyote willow plantings, and I believe, dogwood plantings and several types of vegetation. I know there was a concerted effort in the last two years down along the stream, but I'm not sure about tree species." (***YNC Note**: In a December 3, 2021, email to PL and the City, the **YNC** asked: Can the city tell us how many new trees were planted in MBR over the past two years? On December 6, 2021, an official from Public Lands replied via email: "In the past two years, there have been no new trees planted in MBR.")

BIRDS

Cooper Farr, Director of Conservation, Tracy Aviary, presented a preliminary report about the first official bird monitoring study ever done in the Miller Bird Refuge in 2021. Her full PowerPoint presentation will be posted on the YNC website www.yalecrestneighborhood.org.

- The report was "just a snapshot within a year….we don't have long-term data."
- Collection Method: Breeding season point-count surveys (April-July) 3 sampling points in MBR; Non-breeding season group surveys (August-March), 7 sampling points in MBR; and Owl surveys, (February-May).
- **Results:** Breeding Season: 308 observations, 23 species. Non-Breeding Season: 358 Observations of 27 species Owl Surveys: 2 Western Screech Owls.
- **Most prominent birds found**: finches, thrushes and warblers.
- **Health of bird population.** MBR has "fairly low breeding season species and richness, and low proportion of riparian-associated and urban-sensitive species, but a higher proportion of native species."
- **Recommendations.** Any tree removal should be done outside of the breeding season (during mid-July-February) and a phased manner, not clear-cutting. Maintain vertical structure with a variety of native and/or desirable riparian vegetation throughout the site. Bird-friendly yards, leash dogs, maintain water flow in the stream.
- Red Fox Squirrels pose a threat to bird populations because they eat eggs, disturb nests and use tree cavities that birds prefer for nesting. Farr advised against poisoning the squirrels because raptors will eat them and become sick or die.

Application of Salt Lake's Riparian Corridor Overlay to Miller Bird Refuge. Salt Lake City's Riparian Corridor Overlay, adopted in 2008, regulates all above-ground stream corridors including Red Butte Creek providing opportunities for riparian preservation and restoration: http://www.slcdocs.com/building/b-riparian-corridor.pdf) Dugan has looked into it but is seeking more information.

PESTICIDES AND CHEMICALS

Tordon is an herbicide that contains picloram, an ingredient used in Agent Orange in Vietnam to defoliate forests. It's specified for use along roads, fence lines, various non-cropland areas and on woody plants and trees.

- **General.** Was Tordon ever used in Miller Park? **Kogan**: "Yes, we have used Tordon there in the past, but we've stopped using it. **YNC**: When did you stop using it? **Kogan**: I don't know exactly. I don't want to misspeak. I believe it was last year, but I'd have to find out more specifically….Talking to our maintenance supervisor, primarily what we have been targeting with herbicide application at Miller Park has been invasive tree species and the way we've been applying herbicide to those species has been exclusively using a cut stump and treat method which means when we cut a tree sapling we immediately then apply a very small amount of herbicide directly to that cut stump, the tree takes it into its root system and that tends to be a very effective at actually killing the sapling instead of having it re-spout."
- **Is Tordon recommended for use in a bird refuge? Kogan:** "I don't think we would ever get that kind of guidance from any sort of best practices document, but I can say it has been recommended for control of invasive tree species including the ones we were treating."
- **Do the chemicals applied have an effect on bees? Kogan:** "Our maintenance team reads about each herbicides best practices and works to understand what documented impacts that they may have that are detrimental to pollinators or other species in the environmental before applying that herbicide."
- **Effects, if any, on the root systems of other trees or vegetation? Kogan: "**We never saw documentation from a reliable source that it was likely happening, and our urban forester also advised it was extremely unlikely to be occurring. And when we further looked at what was possible to happen with the extremely small amounts of herbicide, they're applying it seems further unlikely that even it was possible for the herbicide to travel through an interconnected root system of trees. It's not unthinkable." (**YNC Note**: Three sources report that Tordon will kill or harm nearby trees and vegetation, penetrate surrounding roots, is not recommended for use near waterways and may exist at toxic levels for up to a year; in some studies, up to 4 years. A fourth source, the Missouri Department of Conservation, lists Tordon as one of several "failed or ineffective practices."
  https://www.bobvila.com/articles/tordon-herbicide/.
  https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_025812.pdf.
  https://peppershomeandgarden.com/tordon-vs-roundup/

https://mdc.mo.gov/trees-plants/nuisance-native-plants/black-locust-control

- **How frequently are herbicides applied in MBR? Kogan: "**I would estimate we probably have our teams visiting Miller Park to apply herbicides two to six times a year. When I say two to six times, (each visit) would not necessarily be one day, but it might (represent) several days."
- **List of all herbicides and chemical used in MBR in the past. Kogan:** "I'm not prepared tonight to present the full list of every application of every herbicide that was made in Miller Park going back years. That would take quite a bit of resources to pull together that information. **YNC: How would we get that information? Do we need a GRAMA request? Kogan:** "It wouldn't hurt to submit a GRAMA request. That creates a process the city can estimate what the cost and staff time will be to pull that information together and provide it to you. I'll follow up with our maintenance staff after this meeting to see what would be required and try to get back to you."
- **Rodeo (main ingredient: 53.8% Glyphosate; but no longer manufactured**) A resident asked about Rodeo being used in the park in 2014 and the loss of blooms on black locust trees for four consecutive years. **Kogan** acknowledged Rodeo was used but said the city was unable to determine if it impacted the tree blooms, citing the potential of "other factors." (**YNC Note**: Glyphosate is non-selective, meaning it will kill just about any plant it comes in contact with. Sources: National Pesticide Information Center and Missouri Department of Conservation.)
- **Cheatgrass. Kogan:** "Control of cheatgrass is really challenging, not just in the city but all over the West. Certain chemicals have hit the market recently that are pretty effective."

WATER

Last summer, during Utah's hottest year and drought, the stream in Miller Park was dry anywhere from 30-80 days, depending on different reports from residents.
The YNC Chair read an email from **Laura Briefer, Director of Public Utilities**, detailing her efforts to improve water flow in Miller Park and along Red Butte Creek. (**YNC Note**: all of Laura's essential emails on this topic are posted on the YNC website.)

Email received December 13, 2021 from Briefer: In an attempt to help to keep water within the stream and help support the restoration efforts in Miller Park and elsewhere, I have proposed to Mount Olivet and the federal agency that holds the Red Butte Right that we could use a groundwater source of Salt Lake City water to satisfy their cemetery irrigation needs, exchanging by an agreement the provision of that source for the purpose of keeping the volume of their Red Butte right in the stream. This has been complicated by factors outside of Salt Lake City's control, but Salt Lake City is still interested in this to help keep water in the creek. Mount Olivet also has an Emigration Creek water right that is conveyed via a ditch to Red Butte Creek and then diverted for irrigation (the blue dotted line you mentioned). We have also offered the same exchange to keep more water in Emigration Creek. However, even if we could do this,

there still might be times when water gets very low in the stream due to drought and climatic variabilities.

Bottom line. Mt. Olivet Cemetery is entitled to water rights from Emigration Creek and Red Butte Creeks. But these rights also divert water out of Red Butte Creek that would flow into Miller Park. Briefer's creative solution is to get Mt. Olivet to use City water. Another complicating factor is water rights along Red Butte Creek are being adjudicated in Third District Court by the Utah Division of Water Rights. YNC spent an hour on the phone with John Briem in UDWR's adjudication division. UDWR offered Mt. Olivet a certain water allocation from Red Butte but Mt. Olivet is contesting it.

SPRINKLERS AND IRRIGATION

YNC has received several complaints from residents about broken or non-functioning sprinklers in Miller over a number of years.

Kogan: "Immediately after that project (when new sprinklers were installed in 2014) we have faced various challenges in irrigating the natural area. There have been a number of factors.

- **Ravine slopes**. **Kogan**: "One of the most formable factors has been the steep slopes in Miller. I can't think of another space in the city that we are endeavoring to irrigate slopes that are so steep as those in the ravine in Miller. I know there have been issues – very hard to have an irrigation head spray water at any distance and have it go down a slope with that steepness and hit exactly where you want it to."
- **Irrigation Line Breaks/Sprinkler heads on trail. Kogan:** "We've also been plagued with irrigation line breaks and we're aware the boxes and the heads, the irrigation heads that were installed basically underneath the trail surface during that 2014 project, were, in many locations, they are not ideal. They are not flush with the surface of the trail. Not only can they be a tripping hazard, but more commonly people will kick the heads if the heads don't drop completely and cause a breakage, which then can cause a whole zone of the system to fail and may not get caught for a little while. We've had a lot of problems."
- **System rebuilt in 2017.** A storm caused extensive damage at the upper end of Miller Park. **Kogan**: "That threw another wrench in the works because the whole irrigation system got rebuilt during that time and we've had ongoing challenges. Trails and Natural Lands does not have the benefit of having a single irrigation expert; we largely rely on our sister department at parks for their irrigation technicians to resolve issues."
- **Citywide water restrictions. Kogan:** "(Last year) We were under a strict citywide mandate to dramatically reduce water usage across the board due to the drought and I know that impacted every park and natural area in the city and had unfortunate impacts on trees in places from Liberty Park to Miller."
- **Bottom line. Kogan**: "My current understanding is the system is working as intended at least in terms of turning on. If we wanted something far more functional regarding the overspray issues, I think we would probably need a full-blown retrofit; that would be quite expensive. It hasn't come up high enough on the priority list. We have not submitted an application for that."

Stream Bed

Background: During 2014 the city modified the stream bed and stream channel raising the bottom of the stream bed by 3-5 feet by bringing in rock and cobble material and then creating 50 "rock vortex" dams made of large boulders that created pools and "waterfalls." The objective was to widen the small flood plain and to improve habitat and in-stream water quality. Another objective was to create more structural diversity in the stream and slow down the velocity during major storm water events. Intention: create a "pool and drop" structure where fish could survive, provide more places for birds and oxygenate the water.

Early Challenges: Kogan: "I know there have been many concerns expressed to the city after the restoration project that the stream was frequently dry at the surface and was running underground or beneath the cobble. It's fair to say, the city did not anticipate the length of time that it would take for the "voids" – holes or spaces in the rock cobble – to fill up with smaller sand and gravel material that would be flushed down into the system from upstream. That definitely has happened where the first year or two after 2014 we definitely noticed significant portions of the stream were primarily running under the cobble rock. But with each subsequent storm, the amount of fine materials that flushed into the system and then filled up those voids has increased and the stream tends to flow above ground when there's actually water in the stream through pretty much all of Miller Park. It took a number of years to get there but we have been happy with the form the stream has taken. I can't think of another project like it.

Also in attendance from PL and the City: Kat Maus, Miller Park PL manager; Jamie Stokes, community liaison, Mayor's office; Dan Dugan, City Councilman and Council Chair.

YNC Board: Jan Hemming Chair; Rick Oliver and Jim Wester, Co-Vice Chairs; Josh Stewart, Secretary, and Libby Peterson, Treasurer.