



## CITY OF NORMAN, OK STAFF REPORT

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**MEETING DATE:** 1/3/2022

**REQUESTER:** Jason Murphy, Stormwater Program Manager

**PRESENTER:** Shawn O'Leary, Director of Public Works

**TITLE:** CONSIDERATION OF APPROVAL, ACCEPTANCE, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF A CONTRACT K-2122-87 BY AND BETWEEN THE CITY OF NORMAN AND HALL PARK PROPERTY OWNERS' ASSOCIATION, INC FOR VEGETATIVE MANAGEMENT AT HALL PARK LAKES.

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### **BACKGROUND:**

The City of Norman annexed the Town of Hall Park in 2003 and took ownership of the town's assets, including, among other things, three lakes (Tranquility Lake, Sleepy Hollow and West Lake) located within Hall Park, northwest of the intersection of Robinson and 24th Avenue NE. These Lakes are connected to the City's stormwater system and are referred to as the Hall Park Lakes. The City of Norman undertook a comprehensive review and analysis of flooding, water quality, and erosion over a period of four years aimed at reducing flooding dangers, protecting water quality, enhancing the environment and advancing recreational opportunities which culminated in the 2009 Storm Water Master Plan. The Storm Water Master Plan was adopted by City Council on June 28, 2011 as Resolution No. R-1011-120. The Storm Water Master Plan recommended the implementation of a City stream maintenance program focused on those stream reaches and detention facility areas where capital improvements are constructed in order to protect those investments as well as in areas where serious problems have been identified. To date, the City has spent approximately \$270,000 on repairs and maintenance on the dam on Tranquility Lake as well as the cost of annual inspections since it is categorized as a high hazard dam.

The three lakes within Hall Park function as a storm water drainage system. In 2017-2018 OU Environmental Science Student Association (OU ESSA) conducted water quality studies and performed basic bathymetry outlining the base conditions of the Hall Park lakes for the Hall Park Property Owners Association (HPPOA). From March 2019 through October 2019 the Oklahoma Water Survey's POND (Protecting Our Neighborhood Detention) program completed a survey of the plants and vegetation growing around the greenbelt areas. Due to overgrown aquatic vegetation, all of these lakes have experienced loss of storage capacity, lowering in the aesthetic value of this resource, and diminished capacity for recreation. In an effort to improve the situation, HPPOA reached out to Robison Wildlife Solutions who prepared a list of recommendations to decrease the prevalence of aquatic vegetation to improve storage capacity, address aesthetic concerns, and improve access for recreation.

## **DISCUSSION:**

The City of Norman and the Hall Park Property Owner's Association began the process to secure a Participation Agreement to implement the aquatic vegetation management strategies outlined by Robison Wildlife Solutions. The vegetation management program will consist of installation of aeration system(s), vegetation treatment, application of probiotics on an as needed basis, and addition of grass carp. HPPOA has completed the addition of the grass carp to Lake Tranquility.

Under this participation agreement, the City of Norman will have four (4) primary responsibilities. The first is to provide access to the HPPOA to the lakes for the purposes of ongoing maintenance.

Second, the City will install electrical meter boxes to provide electric service to the aeration system. The City has completed installation of the first box at Tranquility Lake at this time. The installation of the second electrical meter box would occur on the North Lake (Sleepy Hollow) within 3 years (by March 2025) of the effective date of this agreement, followed by the third box being installed within 6 years (by March 2028) of the effective date of this agreement on West Lake. Installation of the second and third boxes would be contingent on an evaluation of the effectiveness of the treatment program on Tranquility Lake. Locations for the other two electrical boxes will be selected based on recommendations from the electric service provider. The City will be responsible for paying the cost of electricity for the installed aeration system(s). Additionally, the City will be responsible for maintenance of the aeration system after year 1 of the agreement.

Third, the City may continue to purchase and apply probiotics as needed in Lake Tranquility beginning in year 2 of this agreement as recommended during the annual evaluation of its effectiveness, not to exceed eight applications per year during the months of March through October. Application of probiotics to the North and West lakes may occur at a future date to be determined by the City based on an evaluation of its effectiveness in Lake Tranquility and subsequent to installation of an aeration system in each of these lakes.

Lastly, as indicated in the previous responsibilities, the City will evaluate the effectiveness of the treatment program in Lake Tranquility using an independent third party on an annual basis. If effective, the City will maintain the aeration system in Lake Tranquility, as it is installed, contingent on available funding each fiscal year. Use of any installed aeration system may be suspended at the sole discretion of the City beginning in year 2 should maintenance or electricity costs exceed available funding for this activity. An evaluation of the effectiveness will involve an assessment of the program's improvement of water quality, a reduction in invasive aquatic vegetation as determined by a plant survey, and the cost-effectiveness of the program by the City and HPPOA. The plant survey will be conducted by an independent third party using the same process as was used in the 2019 Oklahoma Water Survey's POND program.

The Hall Park Property Owner's Association has two major responsibilities under this agreement. HPPOA will hire and fund in full the initial costs of the program contingent on available funds and affirmative vote of the HPPOA Board each fiscal year. HPPOA will fully fund the aeration system, grass carp stocking, vegetation treatment and first year probiotics treatments for Lake Tranquility in 2022. Upon determination of the program's effectiveness in Lake Tranquility by the City and HPPOA, HPPOA will fully fund the aeration system, grass carp stocking, vegetation treatment and first-year probiotic treatments for the North Lake (Sleepy Hollow) no later than

March 2025. Upon determination of the program's effectiveness in Lake Tranquility and Sleepy Hollow by the City and HPPOA, HPPOA will fully fund the aeration system, grass carp stocking, vegetation treatment and first-year probiotic treatments for the West Lake no later than March 2028. Additionally, HPPOA will be responsible for addressing any noise complaints received by the City related to the aeration system(s) and cause to be installed any such necessary noise suppression methods as necessary at HPPOA's expense.

Costs related to this project are based on Robison Wildlife Solutions submitted report and costs derived from City electrical rate estimates and other estimated costs determined by Norman Stormwater. Costs are subject to change in subsequent years based on rate changes and changes to material costs. In the attached updated report submitted from Robison Wildlife Solutions on January 3, 2022, they outlined cost estimates reported by Norman Stormwater in September of 2021 and costs that Robison considered likely as of January 2022. The differences in estimated costs are mostly related to herbicide cost assumed by Norman Stormwater in September and aeration system maintenance estimates. Aeration system maintenance costs estimated by Norman Stormwater are based on "worse case" scenario and replacement costs for aeration pumps. Costs estimates provided by Robison are based on their experience with general maintenance related to maintaining equipment. Herbicide application maintenance costs submitted by Norman Stormwater were based on full reapplication each year while Robison's costs are based on a diminishing necessity and quantity needed in subsequent years. HPPOA have agreed to pay for those costs for years following year one if they are necessary. Please see pages 2 and 3 of the Hall Park Restoration Project report submitted by Robison Wildlife solutions for a detailed description of these costs.

For year one, the cost to HPPOA for initial installation, herbicide treatment, grass carp stocking and probiotic treatments are approximately \$16,000. Equipment purchased from Robison Wildlife Solutions come with a 1-year warranty and included maintenance. The cost to the City will be approximately \$1,460 for electricity as well as any costs for water quality sampling and a plant survey to determine the effectiveness of the program at the end of the year. The Oklahoma Water Resources Board has agreed to collect 6 samples over the course of the year to monitor water quality in the lakes as part of their existing agreement with the City of Norman for stormwater monitoring they are already providing. This cost will be included in an existing budgeted contract and will incur minimal additional increase to the City of Norman. A plant survey cost will be determined at a later date. Typically, grant programs or student programs related to state Universities are available to do this kind of work at little to no cost. In the unlikely event that professional services are needed to perform the plant survey, estimated costs could be \$2,000 to \$4,000.

If the program is proven to be successful and cost effective, years two and three of the program would cost the HPPOA a maximum estimated cost of \$1,300 for herbicide treatment if necessary. The City's cost would be an estimated \$5,660 up to \$13,460. The higher end cost reflects significant maintenance or replacement of the aeration system and is not considered likely at this time. Evaluation of the program will continue during these years as well and is included in those cost estimates.

If the program is successful and cost effective, starting in year 4 the HPPOA would incur the cost of installation and startup of the system similar to year 1 costs, approximately \$16,000. City costs would increase by the amount of installation of another electrical service box and electrical

service costs. Years 5 and 6 would incur an additional estimated \$6,000-\$14,000 cost on top of existing costs. Continued success of the program and availability of funding would lead to a third round of these costs to the HPPOA and similar increases in yearly cost to the City. Given these potential increasing costs, base budget amendments would likely be submitted for approval after year one of this project.

If successful, the outlined program would be beneficial to both Hall Park Property Owner's Association and the City of Norman. Success in this case would be an overall decrease to aquatic vegetation without a significant negative impact on water quality. Decreasing the vegetation would lead to an increase in the aesthetic value of these lakes and greater access to them for recreational use. Decreases in vegetation would also benefit the City's stormwater program by potentially increasing storage capacity in these reservoirs. Increased capacity leads to lower chance of downstream flooding and an increase to residence time of water in the reservoirs allowing for natural processes to remove sediment and nutrient pollution. Since the outfalls of these lakes terminate in the Lake Thunderbird watershed, any potential nutrient or sediment storage could potentially help improve the quality of that impaired waterbody.

If upon annual evaluation of the program, the City and Hall Park Property Owner's Association determine that the program is not effective using the evaluation method described above and in Section II.D of the agreement, the City may terminate the agreement with thirty (30) days written notice to HPPOA. Additionally, if funding for the program is not made available by the City or the HPPOA upon adoption of its budget, this contract will terminate upon ten (10) days written notice to the other party. The City will work with HPPOA to address possible funding sources for ongoing maintenance of systems prior to termination of this contract.

Funds for Year 1 electric cost are available in Utility Services-Electricity (account 10550222 – 44310). Funds for water quality sampling and plant survey if needed are available in Professional Services-Other (account 10550222-44099).

#### **RECOMMENDATION 1:**

Staff recommends that Contract K-2122-87 with Hall Park Property Owner's Association for Vegetative Management be approved.

Reviewed by: Shawn O'Leary, Director of Public Works  
Jason Murphy, Stormwater Program Manager