TASK ORDER NO. 19-06
TO
AGREEMENT FOR PROFESSIONAL SERVICES

OWNER: City of Cedar Hills
Effective Date of Master Agreement: January 4, 2016

THIS TASK ORDER NO. 19-06 TO THE AGREEMENT FOR PROFESSIONAL SERVICES (this "TASK ORDER") is made and entered into as of the 11th day of February, 2019, by and between OWNER and Bowen, Collins & Associates, Inc., a Utah Corporation (herein called ENGINEER) who agree as follows:

1. PROJECT. The PROJECT associated with this TASK ORDER is described as follows: 2019 Supply, Demand, and Water Rights Master Plan
   The PROJECT SITE is located as follows: throughout the City of Cedar Hills, Utah.

2. SCOPE OF SERVICES. This task order has been issued to authorize the ENGINEER to provide services as defined in the attached scope of work.

3. FEES. OWNER shall reimburse for services provided under this TASK ORDER on a time and expense basis not to exceed $19,662. The fee is estimated per the attached Man Hour – Fee Estimate Table. Payment shall be in accordance with the AGREEMENT FOR PROFESSIONAL SERVICES.

4. SCHEDULE. The SERVICES associated with this TASK ORDER are anticipated to be completed by June 30th, 2019.

IN WITNESS WHEREOF, OWNER and ENGINEER have executed this TASK ORDER as of the date first above written.

OWNER:

By ___________________________
Name ________________
Title ________________

ENGINEER:

By ___________________________
Name _____________________
Title ________________
February 4, 2019

Mr. Jeff Maag  
City of Cedar Hills  
10246 N. Canyon Road  
Cedar Hills, Utah 84062  

Subject: PROPOSAL TO PROVIDE ENGINEERING SERVICES FOR A 2018 SUPPLY, DEMAND, AND WATER RIGHTS MASTER PLAN

Dear Jeff:

Bowen, Collins & Associates (BC&A) is pleased to submit this proposal to prepare a Supply, Demand, and Water Rights Master Plan for Cedar Hills. Having worked on many other similar plans for entities throughout the State of Utah, we understand the importance of having a solid water rights master plan to serve as the foundation for your water supply system. We are excited for the opportunity to demonstrate our capabilities on this exciting and important project.

UNDERSTANDING OF PROJECT

Th City of Cedar Hills last completed an evaluation of water rights in 2008 (Smith Hartvigsen). While that plan did an excellent job of documenting the water rights of the City and identifying legal action needed to preserve and protect each right, it provided only limited information on how the rights fit into the overall water supply plan for the City. To verify the City has the volume and type of water rights needed to meet its long-term development plans, it is strongly recommended that the City complete an updated supply, demand, and water rights master plan. The focus of this plan should be the engineering aspects of water rights planning to augment the excellent legal information contained in the 2008 plan.

With this overall goal, work under this proposal would include the following major tasks:

- **Develop City Growth Projections to Reflect Recent Development Plans.** We will review and analyze the available water use data to consider overall water use and conservation trends. We will use available GIS mapping of the City to examine the geographic nature of your existing and future demands. We will use the mapping to determine future density and development type in your service areas based on existing and long-term trends and the City’s land use plans. This information will be used to identify existing and projected future water use, both in the culinary and secondary systems of the City.

- **Updating the City’s Water Supply Evaluation.** With new demand projections, we will relook at the City’s water supply plan. Our analysis will be generally based on the existing information contained in the 2008 Water Rights Analysis but will also include updated consideration of new water resources acquired since the last plan was completed. Additionally, it appears that the previous study contained only limited consideration of the seasonal availability and historic reliability of City supplies. We will work with City personnel to identify if any further consideration of seasonal availability and reliability is required for City supplies, especially those supplies consisting of direct runoff from mountain drainages.

- **Formatting the Plan to Meet the Requirements of a State of Utah 40-Year Water Supply Plan.** Utah Code 73-2-12 outlines the limitations and requirements for the extension of time on water rights held by water supply entities. Of specific interest to this report are Sections 73-3-12 (4)(b)(i) & (ii) which allow an extension beyond 50 years for a public water supplier if sufficient proof is demonstrated regarding the need for the water to meet the reasonable future needs of the public for 40 years. The City’s previous Water Rights Master Plan contains most of the information needed to meet this requirement, but does not specifically address this issue. We understand that a subsequent document was submitted to meet this requirement, but it seems more useful to have all the information in one location. To make the plan more useful for water rights support purposes moving forward, we will assemble the plan in a format to demonstrate compliance with the State’s requirements for a 40-Year Supply Plan.
WORK PLAN

Based on the overall approach described above, the following section outlines our proposed detailed work plan for your project.

**Task A. Progress Meetings**

**Task A-1: Project Coordination** – We believe it is very important to have regular coordination meetings with City personnel to review progress and discuss issues that may arise during the master planning process. We will prepare for and attend an expected three progress meetings to be held at various points during the project likely structured as a kickoff meeting, one intermediate progress meeting, and a review meeting at the draft report stage.

**Task A-2: Presentation of Results** – We will prepare for and attend one additional meeting to present the results and recommendations associated with the Master Plan. This could include a presentation to City Council, City administrative staff, or others as directed. We will prepare figures and handouts for these presentations, and address questions regarding the Master Plan.

**Task B. Research Coordination**

**Task B-1: Review Available Water Rights Data** – We will review available data as necessary to update the Water Rights Master Plan. This will include review of: the 2008 Water Rights Plan, recent water share purchases, water production data, and any information or reports on new sources.

**Task B-2: Collect Updated Water Use Data** – To accurately characterize water use patterns for future projections, we will collect updated water use data from the City.

**Task C. Master Planning**

**Task C-1: Evaluation of Existing and Projected Demand** – Based on the information collected in Task B-2, we will develop estimates of both existing and projected demand patterns. This will include identifying average historical use, seasonal use patterns, and the effect of conservation. The State of Utah’s conservation goals and their impact on projected demands will be considered, as will the potential of universal metering requirements. As part of our demand evaluation, we will also consider the implications of the recently passed House Bill 303 (water source sizing) on future projections.

**Task C-2: Supply Analysis** – We will meet with City personnel to discuss changes to the supply analysis since the last water rights master plan. It is expected that we will not need to make any significant changes relative to the analysis of existing water rights, but that evaluation of actual wet water supply will be our focus. Based on the available supply estimated for the City, we will evaluate the adequacy of City sources to meet projected demands.

**Task C-3: Develop a Supply Plan** – Based on analysis results, we will identify water source improvements to address existing and projected future supply deficiencies. This will be presented in a format to meet the State of Utah’s 40-year Plan requirements. We will also assemble a list of actions to be completed by the City to continue to protect and use its existing water rights. Because of the work already done as part of the 2008 study, it is expected that this will not require any detailed research on the past history of the water rights. Our work in this study will be limited to reviewing the conclusions contained in the previous study and then updating the recommendations based on what has occurred since 2008.

**Task D. Report**

**Task D-1: Draft Report** – We will prepare a draft report summarizing the findings of the Supply, Demand, and Water Rights Master Plan. We will distribute 1 copy of the draft report and attend a review meeting to discuss comments and address questions.
Task D-2: Final Report – We will incorporate comments from the draft report into a final report to summarize the findings and final recommendations of the study. We will produce 3 copies of the final report including an executive summary and electronic copy.

We appreciate the opportunity to propose on this project. Please contact us if you have any questions or need additional information pertaining to this proposal.

Sincerely,

Bowen, Collins & Associates

Keith J. Larson, P.E.
Project Manager
## Exhibit B

### Cedar Hills

2019 Supply, Demand, and Water Rights Master Plan

**Engineering Fee Estimate**

Last Update 02-04-2019

### Labor Costs

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### Expense Summary

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**Total Labor Cost** $18,448  **Expenses** $1,214  **Total Cost** $19,662