



## NORTH TAHOE PUBLIC UTILITY DISTRICT

**DATE:** September 13, 2022

**ITEM:** F-5

**FROM:** Chief Financial Officer

**SUBJECT:** Authorize the General Manager to Execute a Professional Services Agreement with HDR Engineering, Inc to Complete a Cost-of-Service Study

### **RECOMMENDATION:**

Authorize the General Manager to execute a Professional Services Agreement, in the amount of \$65,895, with HDR Engineering, Inc (HDR) to complete a Cost-of-Service Study.

### **DISCUSSION:**

At the November 14, 2017 meeting, the Board authorized staff to issue a Request for Proposals (RFP) for a Cost-of-Service Study on behalf of the District. The results of which ranked HDR highest based on the review of the proposals, pricing, and reference checks. At the April 10, 2018 meeting, the Board authorized the General Manager to negotiate and execute an agreement for Cost-of-Service Study with HDR.

The Board, District Staff, and HDR worked diligently across multiple public meetings to analyze the District's cost of service as well as its existing water and sewer rates. A major outcome of this effort was the development of proposed rate structures for both water and sewer that would be implemented over five years and in compliance with the State of California Proposition 218.

The effort included HDR attendance at public meetings, the development of an online webinar communicating the Cost-of-Service Study process and outcomes, as well as the design of the outreach materials.

Upon completion of the Study, the Board approved the implementation of a new five-year rate structure at the November 12, 2019 Public Hearing, with an effective date beginning January 1, 2020 and running through June 30, 2024.

With the District nearing the end of the current five-year rate period, it is now time to undertake a new Cost-of-Service Study to assess the District's utility rates relative to its projected costs over the next five-year period. This next step in the District's on-going "rate maintenance" effort is consistent with industry best practices, Board discussion during the previous Cost-of-Service Study, and the priorities established for the Fiscal Year 22/23 Operating Budget. Further, the priorities established by the Board of

Directors in the District's five-year Capital Improvement Plan are dependent on the ability of utility rate revenue to fund them.

During the course of the previous Cost-of-Service Study, it was the staff's experience that HDR met and exceeded expectations for industry knowledge, effectiveness, and professionalism. As such, and in the interest of consistency in charge structure development and methodology, staff recommends conducting the second Cost-of-Service Study utilizing HDR.

**FISCAL ANALYSIS:**

The total cost of the Study will not exceed \$58,300 with an additional \$7,595 in expected travel expenses for a total of \$65,895. The proposed expenditures will occur over the course of two Fiscal Years, 22/23 and 23/24. A total of \$60,000 has been included in the proposed Fiscal Year 22/23 Operating Budget (\$30,000 in each the Sewer Fund 21-5030-4465 and the Water Fund 31-5030-4465) to allow this work. Based on the presented scope and timeline, Staff anticipates a spend of \$40,000 during the FY 22/23 with the remaining \$25,895 being included in the FY 23/24 operating budget.

**STRATEGIC PLAN ALIGNMENT:**

Objective 2: Maintain Highest Level of Safe Sustainable Sewer and Water Service – Goal 2.4: Ensure Capital Funding is Adequate to Sustain Systems: Sewer, Water, Base – Tactic b: Assist in Cost-of-Service Study with Timely Data

Objective 3: Provide Exceptional District Governance – Goal 3.9: Increase Public Outreach and Exposure

Objective 5: Ensure Financial Sustainability – Goal 5.1: Maintain Stable and Sustainable Rates – Tactic b: Conduct External Rate Review with Third Party and Staff Input


Objective 5: Ensure Financial Sustainability – Goal 5.6: Maintain Reserves at Desired Level According to Adopted Policy – Tactic b: Ensure Compliance with Proposition 218 for Current or Future Rate Structure

**ATTACHMENTS:** HDR Proposed Scope of Work

**MOTION:** Approve Staff Recommendation.

**REVIEW TRACKING:**

Submitted By:   
Vanetta N. Van Cleave  
Chief Financial Officer

Approved By:   
Bradley A. Johnson, P.E.  
General Manager/CEO

## North Tahoe Public Utility District Water and Sewer Rate Study Update

### Scope of Services

#### Task 1—Project Management

This task includes the general project management activities that are required to complete the project on time and within budget. This includes allocating the appropriate labor resources to the project and working with the District’s project manager to schedule project meetings and provide regular progress reports.

##### ***Deliverables as a Result of Task 1:***

- Coordination with the District’s project manager.
- Monthly progress report of project status and budget.

#### Task 2 – Initial Written Data Request

A written data request will be provided to the District prior to the initial project kick-off meeting (Task 3). The written data request will provide a detailed list of the data required to complete the rate and connection fee update. Where data or information may be difficult, cost prohibitive, or impossible to provide, HDR will work with the District to resolve the data issue. The data and information requested will be similar to the data requirements of the prior study. Given the District’s and HDR’s familiarity with the data, it is anticipated that the data should be readily accessible.

##### ***Deliverables as a Result of Task 2:***

- Initial written data request.
- Identification of data constraints and outstanding data needs.
- Accumulation and organization of the data provided by the District.

#### Task 3—Initial Project Kick-Off Meeting

An initial project kick-off meeting will be held at the District’s office. It is proposed that this meeting be approximately three hours in length and attended by HDR’s project manager and assistant project manager/task lead. The main objective of this meeting is to introduce the project team members, discuss key objectives for the study, and review the approach/scope of services. This meeting will also allow the District to provide input into the development of the technical analyses and rate alternatives. The project schedule will also be finalized at this initial project kick-off meeting. Finally, HDR will review with the District the initial written data request and items that may be difficult to provide.

##### ***Deliverables as a Result of Task 3:***

- Initial kick-off meeting at the District’s office.
- The meeting will be approximately three hours in length and attended by the HDR project manager and assistant project manager/task lead.

#### **Task 4 – Review of the District’s Existing Rate/Financial Policies, Planning Documents, and Capital Improvement Plan**

Given the establishment of the rate setting approach during the prior rate study, this task will review the existing rate/financial policies. Further, the recent planning documents and capital plan will be reviewed to gain an understanding of the future funding needs for each utility. This task is not intended to develop new financial policies or evaluate the planning approach, rather it is to gain an understanding of the current District’s plans for use in the development of the water and sewer rate update.

##### ***Deliverables as a Result of Task 4:***

- Review existing written rate/financial policies of the District.
- Review of the District’s current planning documents.
- Review the proposed capital improvement plan.

#### **Task 5—Revenue Requirement Analysis**

The development of the revenue requirement analyses is the first major analytical step of the comprehensive utility rate study process. HDR will develop a water and sewer revenue requirement analysis using generally accepted rate-setting methodologies. This portion of the study entails reviewing the various sources of funds (revenues) and comparing them to the applications of funds (expenses) for each utility, while considering the prudent and proper funding for O&M and capital expenditures. Ultimately this step determines the need for future water and sewer rate revenue adjustments. A more detailed discussion of the various steps involved in developing the revenue requirements for each utility is provided below.

**Step 1 – Selection of a Test Period:** A “test period” refers to a timeframe of reference for the accumulation of revenues, expenses, and consumption data. For the water and sewer rate update a projected time period of FY 2024/25 – 2028/29 is proposed.

**Step 2 – Method of Accumulating Costs:** The next decision is to determine the basis or method of accumulating costs. A “cash basis” methodology is proposed for each utility’s revenue requirement analysis. This methodology sums O&M expenses, taxes/transfer payments, debt service, and capital improvements funded from rates. The prior study used the cash basis method and it is assumed that method will be used for this study as well.

**Step 3 – Accumulation of Revenues and Expenses:** Once the test period and method of accumulating costs has been determined, HDR in conjunction with District management and staff, will develop the test period revenue requirements.

The first step in the revenue requirement analysis is the projection of revenues at present rate levels for each utility. Care will need to be taken on the projection of revenues for each utility. Given recent droughts and the COVID pandemic, as well as recent mandated conservation targets, current consumption levels are likely not reflective of normal water conditions. HDR will review water consumption history and work with the District develop a reasonable projection of water sales and wastewater volumes and resulting revenues.

The revenue requirement is composed of two major types of costs: operational and capital expenses. The operational costs are generally projected from historical or budgeted costs, using escalation or inflationary factors, and adjusted for known changes (e.g., additional personnel,

growth/expansion). As part of this study, HDR will work with the District to review the allocation of intra-district expenses relationship to the water and sewer funds. While the projection of the O&M costs is fairly straightforward, the projection of capital costs is generally the focus of the analysis and requires more thought and planning.

The starting point for projecting capital costs (expenditures) will be the capital improvement plan for each utility. In the financial planning process, consideration must be given to maximizing the capital expenditures, while minimizing rates to the extent possible. This is accomplished in a variety of ways. However, the most important aspect of this discussion is that there are multiple methods of financing capital expenditures, and it is through this process that rates can be minimized. This analysis is developed on a year-by-year basis by listing the annual capital projects, and then determining the various funding sources for each of the projects. The balance of projects not funded by the available sources of funds must be financed from a combination of long-term debt and rates. It is the balancing of the use of long-term debt to the impact on rates, which is critical to the analysis. The goal of the capital funding analysis is the attempt to maximize capital projects while minimizing rate impacts to customers. Through an iterative process, a final plan can be developed for each utility that meets each utility's capital needs, while providing a smooth transition from a financial and rate setting perspective.

In developing the final revenue requirements, a number of financial planning aspects are also taken into account. These include, but are not limited to, debt service coverage ratios, minimum operating and capital reserves, and minimum annual funding for replacement and upgrade of infrastructure.

At the conclusion of the revenue requirements, HDR will develop summary pages for each utility comparing the present revenues to the projected operating and capital expenditures for the FY 2024/25 – 2028/29 projected time period. This will provide the overall cost-basis for the proposed adjustments to the District's revenues (i.e., rates).

### ***Deliverables as a Result of Task 5:***

- A “stand-alone” revenue requirement analysis, for each utility, for the projected time period of FY 2024/25 – 2028/29, which considers the necessary and prudent operating and capital needs of each utility.
- Projection of water consumption and wastewater volumes and revenues to reflect current customer demands and projections. Projections will consider the potential long-term changes in customer demands, along with the District's long-term water conservation goals.
- A capital financing plan within the revenue requirement analysis for each utility that attempts to maximize capital expenditures, while minimizing the bill impacts to customers over time.
- Review of the issue of funding intra-district funding needs and allocations to the water and sewer utilities.
- Recommendations regarding key financial indicators (debt service coverage, capital replacement, annual target for reserve fund balance, etc.) for each utility.
- A half-day project meeting to review the draft revenue requirement analysis for each utility. The meeting will be attended by HDR's project manager and assistant project manager/task lead or rate analyst.

## Task 6—Cost of Service Analysis

In simplified terms, a cost of service analysis attempts to proportionally distribute the revenue requirement of each utility between the identified customer classes of each utility. The basis for establishing water and sewer rates that are cost-based and proportional has traditionally been cost of service principles and methodologies. The State of California has certain well-established legal constraints regarding utility ratemaking, of which Proposition 218 (California Constitution Article XIII D) is at the forefront. In short, Proposition 218 requires the utility to establish cost-based rates for the services provided. This task is designed to specifically address this legal requirement to develop the cost-basis for both the fixed and consumption/variable charges for the rate structures of both utilities.

A brief discussion of the major steps associated with the proposed cost of service analyses for the water and sewer utility is provided below. The general approach for both utilities is similar, except where noted otherwise.

**Step 1 – Selection of Test Period:** A cost of service analysis typically reviews a one-year period, or the period over which rates will ultimately be set. For cost of service purposes, allocating the FY 2024/25 revenue requirements would appear to be appropriate.

**Step 2 – Selection of the Method to Accumulate Costs:** The cash basis revenue requirement for each utility will be used for the cost of service analysis. This is the approach used to develop the prior rate studies completed for the District.

**Step 3 – Functionalization and Allocation of Expenses:** Functionalization refers to the arrangement of cost data into its basic cost categories. For a water utility, this typically takes the form of source of supply, treatment, transmission, and distribution, etc. For a sewer utility, this generally includes treatment, collection, and pumping. The functionalization of costs is typically accomplished within the system of accounts used by the utility. Given functionalized costs, the costs are then allocated to their various cost components based upon the reason why the cost was incurred. For example, allocation determines whether a water cost was incurred to meet a commodity (average), capacity (peak), customer, or fire protection-related need. For a sewer utility, it is generally allocated as volume, strength, and customer-related needs. Allocation of costs for each utility will be based upon generally accepted cost of service techniques (i.e., AWWA, WEF) and the specific system characteristics of each of the District’s utilities and customers.

**Step 4 – Determination of Classes of Service:** The cost of service will distribute the allocated costs to classes of service (e.g., single family residence, multi-residential properties, and non-residential properties). As a part of this study, HDR will review and confirm with the District the customer classes of service used for each utility.

**Step 5 – Review of Customer Consumptive Use and Tier Sizes:** An important objective of the cost of service is to provide the basis for tiered rates by reviewing consumptive use records and determining the appropriateness of tiers. This step will review the consumptive data of the District and confirm or adjust the tier sizes based on District customer characteristics. As noted previously, the cost of service will distribute cost to classes of service and the pricing tiers used within a rate design.

**Step 6 – Distribution of Expenses:** The next step is to distribute the allocated cost to each class of service using distribution factors. HDR will develop distribution factors that are proportional to each customer class of service, and which rely upon District-specific data. In particular, the development of water commodity and capacity distribution factors, by pricing tier, will require a significant level of care and effort. Based upon the prior step, HDR will have reviewed the individual customer billing data to sort and analyze consumptive use by pricing tier.

**Step 7 – Summary of the Cost of Service:** From the above process, a summary page of the cost of service study, for each utility, will be developed. The summary page compares the difference between the current level of rate revenues received from each class of service, and the allocated cost of service for each class. This provides an understanding of the relationship between the costs each customer class of service places on the system and the revenues received from the customers. From this summary, a determination can be made as to the rate adjustments, by class of service, which are reflective of cost responsibility.

**Step 8 – Development of Average Unit Costs:** The cost of service provides the allocation of costs to each class of service, but it also provides average unit costs, or cost-based rates. These cost-based rates are used as the starting point for the development of the final proposed water and sewer rates. Average unit costs also provide the District with an understanding of the cost/rate relationship between fixed and variable costs, as well as provide the cost basis for the fixed and consumption/volumetric pricing for the water and wastewater rates.

***Deliverables as a Result of Task 6:***

- Review each utility's customer classes of service and determine revisions for cost of service and rate design alternative purposes.
- Review the consumption characteristics of the District's customers to confirm the use of pricing tiers and the size of the tiers.
- A proportional distribution of the revenue requirement to the identified customer classes of service of each utility.
- A summary of the average unit costs (cost-based rates) for each utility.
- A half-day project meeting at the District's offices to review the approach, summary, and recommendations of the cost of service analysis for each utility.

### **Task 7—Rate Design Analysis**

The starting point for the rate design process is understanding the District's rate design goals and objectives. One key rate design objective is to have cost-based, sustainable, and proportional rates. The development of the revenue requirement analysis and cost of service analysis for each utility was designed to specifically address the issues of adequate funding, provided from cost-based and proportional rates. This task will focus on developing a simple and acceptable rate structure using the findings, conclusions, and recommendations for the revenue requirement and cost of service analysis for each utility.

As a part of this task, HDR will work with the District to review the current rate designs and develop alternative rate structures for the District's Board to review and consider for each utility. HDR will develop rates for a five-year period, assuming annual adjustments. For each rate design developed, HDR will discuss the advantages and disadvantages of the particular structure. In addition, bill impacts (i.e., bill comparisons) will be developed for each rate alternative, which



clearly illustrate and highlight the impacts to customers across various levels of usage. These will be presented in both table and graphical format. Finally, comparable utility bill comparisons will be provided to help show how the District's cost of providing service compares to other agencies in the area.

***Deliverables as a Result of Task 7:***

- Review of the District's rate design goals and objectives.
- Review of the District's current water and sewer rates and develop up to two rate design alternative for each utility and customer class of service.
- Bill comparisons and graphs for the rate design alternatives.
- A virtual project meeting to review and discuss the alternative rate designs.
- Neighboring bill comparisons for comparable utilities.

**Task 8—Written Reports**

At the completion of the rate analysis, HDR will develop a draft written report of the water and sewer rate studies. The written report is intended to be comprehensive in nature and document the activities undertaken as a part of the project, along with our findings, conclusions, and recommendations. Within the reports, HDR provides an appendix of the technical analyses undertaken. HDR will provide an electronic copy of the draft report to the District for its review and comment. Comments, suggestions, or corrections from the District or legal counsel concerning the draft report will be incorporated into the draft final report. HDR will provide an electronic version of the draft final report to the District. At the conclusion of the study, HDR will incorporate final legal comments from the District attorney, and final direction from the District's Board.

***Deliverables as a Result of Task 8:***

- An electronic copy of the draft and draft final report.
- An electronic copy (word and PDF) of the final report.

**Task 9—Project Meetings and Public Presentations**

As a part of this study, HDR will provide up to three onsite project meetings and three public presentations. This project approach (scope of services) has been planned accordingly. Provided below is a more detailed discussion of the project meetings and public presentations proposed as part of the District's water and sewer rate studies.

**Onsite Project Meetings with District Staff:** The three onsite project meetings are assumed to review the following key tasks:

- Initial Project Meeting (Task 3)
- Review of the Revenue Requirement Analyses (Task 4).
- Review of the Cost of Service Analyses (Task 5).

In addition, HDR will coordinate with District staff during the course of the study for virtual project meetings to gain feedback and input at key points and review draft final analyses. The hours associated with the onsite and virtual meetings have been included within each of the corresponding tasks.

**Public Presentations:** To meet the requirements of Proposition 218, the District will need to hold



at least two public meetings. The first public meeting will be for the District's Board to accept the study and set a public hearing date. The second public meeting, noticed as a part of the Proposition 218 process, allows for rate protests to be tallied and action to adopt the proposed rates taken by the District's Board. HDR would also recommend a Board meeting to review and discuss the preliminary study results prior to the two public meetings to gain feedback and policy direction. Public meetings beyond the three proposed will be billed on a time and material basis.

### ***Deliverables as a Result of Task 9:***

- Up to three onsite project meeting with District staff to review the draft results of the analyses.
- Additional, as-needed virtual meetings to discuss key issues or study results and recommendations with District staff.
- Up to three public presentations to present the study approach, conclusions, and recommendations.

### **Task 10—Computer/Rate Model**

As part of this study, HDR will develop financial/rate models for the District's study. The models will be developed specifically for the District and their utilities. This will allow for input from District staff at the start of the study to help design and construct models, which are easy to understand and use. Models will be developed in Excel and will be provided at the end of the study. No user training or manuals have been assumed.

### ***Deliverables as a Result of Task 10:***

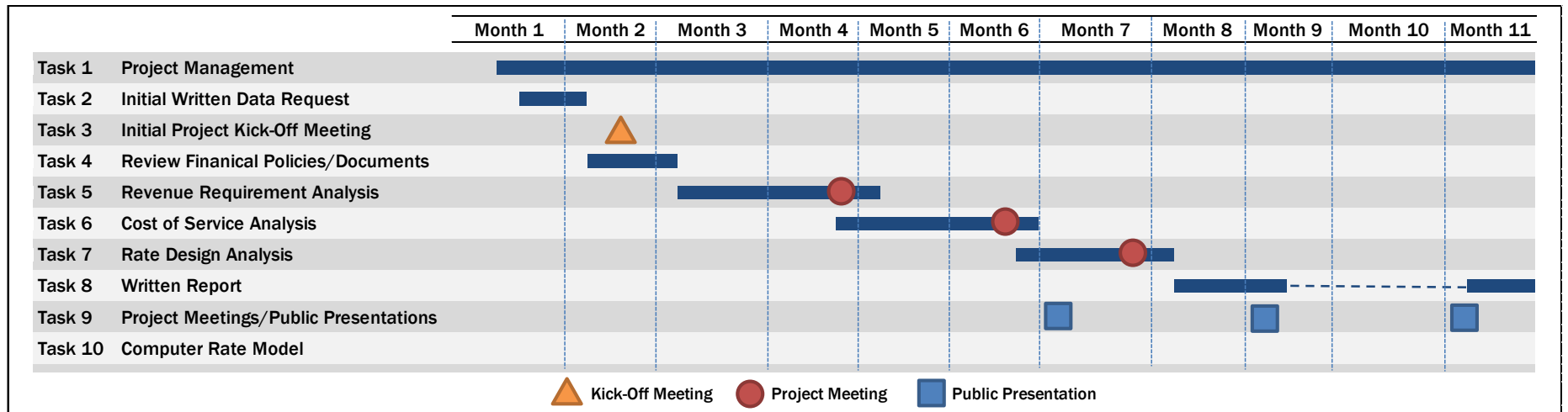
- A final copy of the water and sewer rate models developed in Microsoft Excel.

This concludes the scope of services for the District's water and sewer cost of rate study. Additional services provided by HDR that are not included within the above scope of work will be provided on a time and material basis at the stated hourly billing rates. HDR will obtain written consent from the District before undertaking or completing out of scope work.

### **Estimated Project Time Schedule**

An estimated project time schedule has been developed for the District's study. The meetings and presentations will be scheduled in advance at a mutually convenient time. Provided below is the estimated project time schedule.

Exhibit A – Scope of Work



## Exhibit B – Rate Schedule and Fee Estimate

### Rate Schedule

Our proposed hourly rate schedule, by classification, is provided below. These hourly rate schedules will be in effect during the course of the study. These rates will apply for the proposed scope of work.

#### Labor

##### HDR Hourly Rate Schedule July 2022 through December 2023

Project Manager	\$305.00/hour
Assistant PM/Task Lead	\$235.00/hour
Senior Financial Analyst	\$180.00/hour
QA/QC	\$220.00/hour
Engineering Assistance	\$180.00/hour
Accounting/Admin	\$135.00/hour

*The hourly billing rates shown above cover payroll cost, employee benefits, and HDR overhead and profit.*

#### Expenses

Vehicle Mileage	Current Federal Travel Regulation (FTR)
Black/white Photocopies (per copy)	\$0.05 to \$0.09
Color Copies (per copy)	\$0.15 to \$0.30

*No markup on expenses.*

*Other direct expenses (e.g., parking, mileage, airfare) will be billed at cost.*

### Fee Estimate

The project fees are a function of the hourly billing rates for the employees to be utilized on the District's study and the proposed scope of services. Provided on the following page is a summary of the estimated project fees for scope of services developed in Exhibit A.

## Exhibit B – Rate Schedule and Fee Estimate

<b>Summary of the Estimated Fees for the Water and Sewer Rate Study Update</b>	
<b>Task Description</b>	<b>Total</b>
<b>Labor:</b>	
Task 1: Project Management	\$3,240
Task 2: Initial Data Request	830
Task 3: Initial Project Kick-Off Meeting	2,990
Task 4: Review of the District’s Existing Policies, Documents, and CIP	2,270
Task 5: Revenue Requirement Analysis	11,260
Task 6: Cost of Service Analysis	13,860
Task 7: Rate Design Analysis	7,800
Task 8: Written Reports	6,140
Task 9: Project Meetings and Public Presentations	9,080
Task 10: Financial/Rate Models	<u>830</u>
Grand Total Labor	\$58,300
<b>Total Expenses</b>	<u>\$7,595</u>
<b>Grand Total “Not to Exceed” Fees</b>	<b><u>\$65,895</u></b>

HDR is estimating a total fee of \$65,895.00 for the proposed services. During the course of the study, HDR will keep the District informed of the progress of the study with respect to time schedule and the project budget.

In developing the fee estimate, it should be noted for Task 9, Project Meetings and Public Presentations, that the hours associated with this task are only related to the public presentations to the Board. The hours associated with the three internal project meetings are included within the hours of the tasks associated with each of the meetings (e.g., the revenue requirement analysis task [Task 5] contains internal project meeting hours).